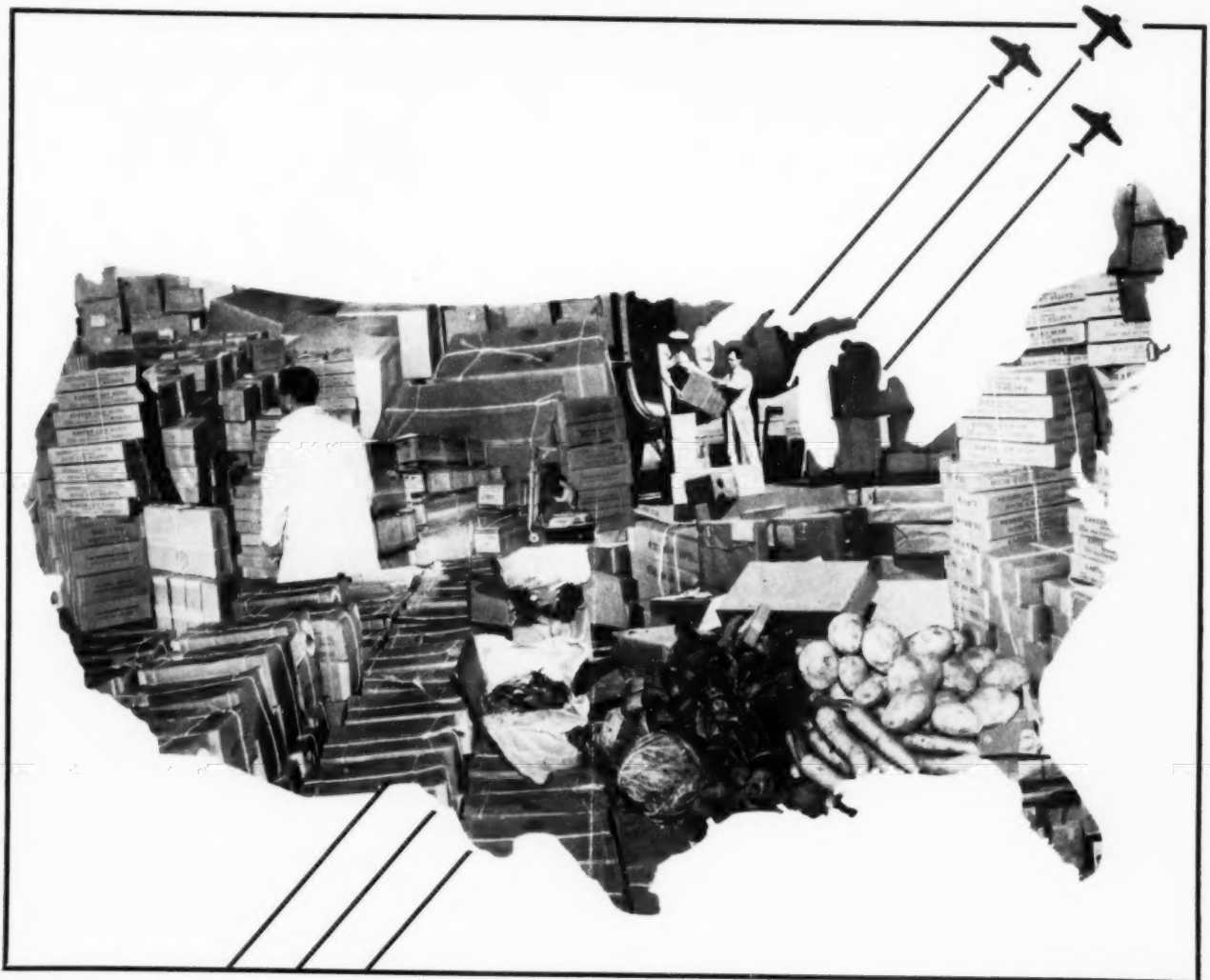


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THE WORLD'S FIRST AND



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AIR TRANSPORTATION

The World's First and Only Air Cargo
Magazine . . . Established
October, 1942



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Vol. 23, No. 1

July, 1953

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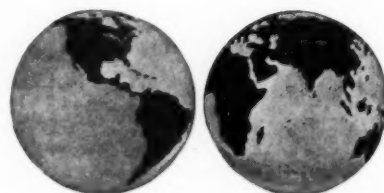
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October, 1942



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AIR TRANSPORTATION, published once each month, thoroughly covers the entire air cargo industry for the benefit of all those engaged in shipping and handling domestic and international air freight, air express, and air parcel post, as well as using the domestic and international air mail services. Included in **AIR TRANSPORTATION'S** wide coverage are: air shipping, cargo plane development, rates, packaging, materials handling, documentation, air cargo terminal development, insurance, routing, interline procedures, new equipment, commercial airlines, military air transport service, air freight forwarders, personnel and business air travel.

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The CAA's Interest in Air Cargo Terminal Requirements

by Philip A. Hahn, Chief, Airport Engineering Division, Civil Aeronautics Administration

PHILIP A. HAHN, chief of the Engineering Division, Office of Airports, Civil Aeronautics Administration, spent several years in industry with material companies and was associated with general contractors in research, design and construction, with particular emphasis on highway and airport projects. For several years he served as Chief of Engineering in the Airports Division of the CAA's Sixth Region with headquarters in Los Angeles. In 1949 he was called to Washington to serve in his present capacity where he directs the development and establishment of engineering standards governing design and construction of airports throughout the Continental United States and its Territories.

AIR CARGO HANDLING is, in a sense, a squeaky wheel of the aviation industry. It is encouraging, however, to see industry making a concerted effort, under the auspices of the National Security Industrial Association's Air Cargo Task Committee, to isolate the sources of these discordant notes so that oil may be applied in the proper places. The Civil Aeronautics Administration is pleased to be able to observe the proceedings of this Panel, those of the Air Cargo Task Committee and will endeavor to assist wherever possible in the isolation of the squeaks, especially those emanating from the airfreight terminal facilities.

The basic problem facing us today is: How can airport development aid in the growth of air cargo operations and vice versa, what effect will air cargo operation have on airport development?

To aid in the development of a sound system of airports, we are constantly examining and re-examining the many factors of airport operation for the purpose of establishing criteria for general planning, layout, configuration and size. Obviously, all airport considerations must be developed with an eye to the future. But what are the future needs for cargo operations and how can we determine them?

The data obtained from a careful analysis of present activities and associated facilities when used in conjunction with the forecast of future volumes will produce a good guide to future facility needs. (Incidentally, we employ several mediums in Washington for making forecasts.) The CAA's recently completed a study entitled, "Domestic Air Cargo Forecast," took into consideration many factors and extended to 1960. It was estimated that by 1955 enplaned air cargo would approximate 450,000 tons annually and that by 1960, the volume would reach 850,000 tons annually. The study also resulted in a forecast of 400 million cargo ton miles in 1955 and 700 million cargo ton miles in 1960. Actually, the forecast is within 10% either way from the figures cited. The 1960 estimate is approximately 2.8 times the 1951 tonnage.



Taking the national estimate as a basis and taking local conditions into account, it is possible to estimate a particular location's 1960 annual tonnage. This is only one step in the process of determining future needs. The cargo handling equipment and techniques have a profound effect on the nature and extent of cargo facilities needed at an airport. The big problem lies in the gap between the cargo building and plane. The CAA is looking to the air cargo industry to develop logical solutions to these problems.

Let's for a moment briefly examine what the effect on airport development is because of the time it takes to prepare an all-cargo flight by present methods. It is our understanding that a crew requires approximately two hours to load a typically four-engine all-cargo aircraft. Now, if an evening's

accumulation of cargo is sufficient to dispatch 20 such planes between 9 p. m. and 1 a. m., simple mathematics show the need for 10 loading positions. At a cost of say 100 thousand dollars per loading position which includes the apron, building and truck court, approximately one million dollars must be invested to provide the basic airfreight terminal facilities for the peak-hours of operation in our example. If loading time could be cut 50% through improvement in techniques and equipment for handling cargo, the requirements for facilities on the airport would likewise be substantially reduced. Also, loading time has a profound effect on cost of operations. Most of us probably are aware of the results of a study made by an airport consulting engineer sometime ago which showed that in a typical airfreight operation, 85% of the in-transit time for goods shipped from New York to Detroit represented ground handling and only 15% time in the air. In transporting air cargo between New York and Los Angeles, 67% of total transit time was spent on the ground.

All phases of airport activities related to airfreight must be scrutinized toward a reduction of the time necessary to perform the operations as well as the costs thereof. These

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WHAT is air cargo handling? How is it done? Why is it important? These are some of the questions that potential air shippers most frequently ask, and some of the answers are hereby given.

GROUNDWORK

CARGO HANDLING has many definitions, depending of course on the transportation medium used. For the purposes of airfreight transportation, the action of handling cargo for air, simply stated, consists of picking up the cargo, carrying it to or from the plane, and putting it down. More formally stated, air cargo handling is the art and science of moving any shipment into or out of its transporting vehicle, while the equipment used in modern cargo handling determines the speed with which such handling is accomplished.

By handling air cargo properly, the smallest part of a bulk shipment up to the largest of heavy units can be moved



quickly and in the most economical manner. Thus it may well be considered an engineering science requiring thought and regulation and even strategic maneuvering. Inasmuch as the air-going packages and containers in which shipments are flown have an important bearing on the manner of handling both before and after shipping, packaging also occupies a large place in this process. The more secure the package, the easier it is to carry and stack. In air shipping, security may be attained with a minimum of packaging owing to the fact that shipments reach their destinations in a matter of hours or days when they go by air rather than in weeks when they go by surface shipping.

Good cargo handling procedure aims at the further development of integrated methods for moving air cargo from the consignor to the consignee in the

stages immediately preceding or following its movement by air.

Handling air cargo offers sufficient opportunities on the part of the airlines to save time and material, reduce losses from breakage and pilferage (already substantially reduced by air transportation) and to increase the utilization of cubic space. Save for the last item, all of these affect the shipper to a certain extent. Reduction of loss and pilferage offers him greater security as well as savings in insurance rates, and the saving of time and material is an economical advantage that can be reflected in the lowering of airfreight rates. Therefore, the more efficient cargo handling procedures become, the more will shippers realize the economies involved in shipping by air.

Surveys have shown that there is still much to be done in the field of cargo handling, and that air cargo still spends too much time on the ground. However, newer methods are constantly being devised that will move cargo on the ground in a manner more in keeping with the speed of flight. Since this is not a static field, but rather one in which constant attention is being directed towards improvements, shippers have good cause to feel not only that air shipping is a wholly economical way to send their goods now but that it will be more economical in the future.

Some of the Tools

Generally, the forklift truck is the most versatile of the cargo handling equipment used around warehouses, depots and terminals. However, a wide variety of equipment does exist which, in addition to the forklift, include various kinds of industrial tractors used to pull long trains of trailers (powered

hand trucks come under this general heading). Simple, manually operated floor trucks on either casters or wheels are also used extensively at a great many airports. An important auxiliary to the forklift as well as the other types of industrial truck is the pallet. This structure, or small platform, may be made of steel, wood, aluminum, plastic, cardboard, wire, magnesium, or wood and steel combined. More items by far can be stacked on a pallet and handled with ease by a forklift than can be handled individually, for with

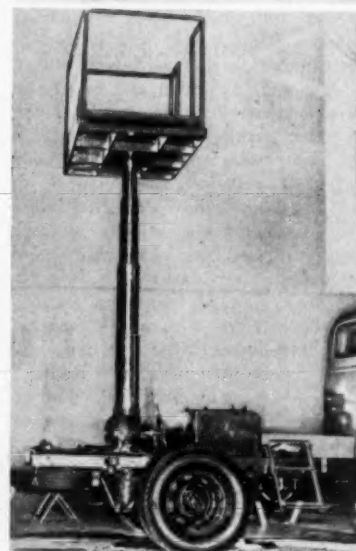
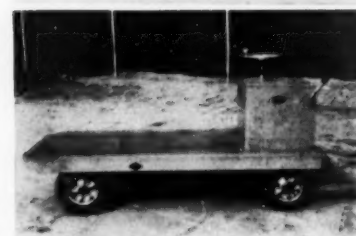
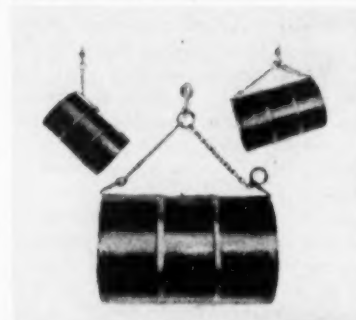
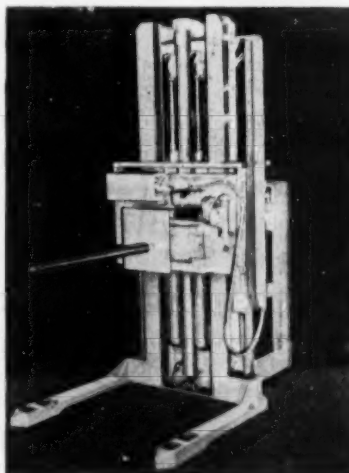
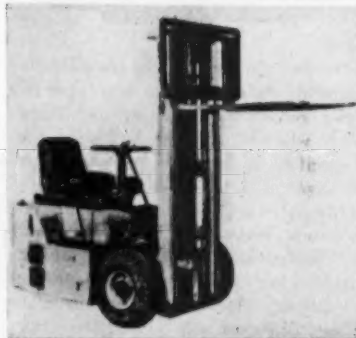


the pallet the principle of consolidation comes into play. At present, there is a trend toward the increased use of unit loads whereby a pallet is loaded with a specified amount and arrangement of packages at the cargo terminal, secured to the pallet and flown to its destination as a unit. Many types of conveyor belts are being employed for moving air cargo either into or out of an aircraft or through the terminal itself. The rubber conveyor belt is most frequently used today, with the roller skate wheel type growing in importance. Loading ramps and movable docks are types of equipment that offer a departure from those already mentioned here.

From the foregoing we can see what is currently being done in and around the airports. At Miami's International Airport, railroad tracks facilitate the transfer from one form of transportation to another. At Chicago, a good portion of the allotted cargo space is covered with conveyors to facilitate sorting and handling. At New York's

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FOR HANDLING



AIR CARGO

by Milton A. Caine
Managing Editor

FOR that portion of the time in which air cargo, be it large or small packages, huge crates, industrial machines or boxes of flowers, is on the ground, it comes in contact with an assortment of men who move it from one place to another—from plant to truck, from truck to warehouse, from warehouse to plane, give or take one or two movements. To facilitate their job and even to reduce the time in which the various items constituting airfreight is kept earthbound, various manufacturers are improving their products for quicker and safer cargo handling. Newer improvements are constantly being made, newer developments produced, newer concepts of cargo handling being evolved all to give speed to shipments in their pre-airborne stage.

Cargon, Loadair and United Air Lines' proposed loading terminal (all covered in previous issues of AIR TRANSPORTATION) are newer concepts in loading principles. With the former, the cargo is loaded on huge trays that fit inside the cargo compartment of a Bristol Freighter, and with the other two, the planes themselves ride on tracks that carry them closer to the loading terminal. Lockheed has devised an elevator that can raise the cargo up to plane height as well as a heavy duty movable chain device imbedded in the floors of its cargo Super Constellation for jockeying the cargo into position inside the plane. These also embody newer principles for the handling of air cargo.

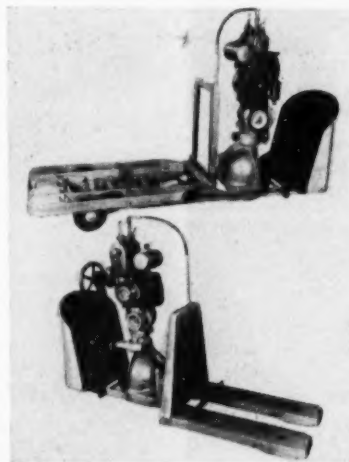
But more often it is the maker of industrial trucks who produces improvements most consistently, for the industrial truck is the piece of equipment most frequently used at airports and airfreight terminals. Of course, flat cars are also used, as well as conveyor belts, but not yet to the extent probably that the forklifts are used both in the United States and abroad.

Moving from the general into the specific, let us look at a few of the newer developments that recently have been announced. For instance, four new HiDuty lift truck models, hereinafter to be designated as the 'FLW' series, have been announced by the Transitier Truck Company. These four,

introduced to give lift truck users a wider choice of equipment, permit maximum forklift height without increasing the collapsed height. Furthermore, the buyer is given a choice of either the Waukesha industrial engine or the Crosley industrial engine, both being liquid cooled, four cylinder types that develop ample horsepower and are known to be quite rugged.

At terminals where loading docks are not available, the Safeway Lift Truck should prove useful. Designed for one man operation, the new unit is made in three sizes with lifting heights of 68, 80 and 100 inches. An electronic switch cuts off power at maximum height to prevent jarring the load and damaging the hydraulic system. Though of the forklift type, Safeway Industrial's truck can be equipped with a 'snap-on' platform, converting it thereby to an all-around lift truck capable of performing such tasks as stocking drums, bales or other heavy objects and transferring dies. Economy and ease of operation are two further assets of this model.

For hoisting operations, the Truck-Man Division of the Knickerbocker Company has recently put out an automatic power lift available on all skid and pallet low-lift trucks that, the com-



pany maintains, offers considerable savings in time required per trip. The lift is a powerful hydraulic pump that is installed directly on the engine and transmits a pressure up to 1000 psi. through a 360° swivel elbow fitting and

flexible tube to the cylinder. This type of fitting has proved satisfactory on high speed presses and many similar heavy duty machines. A full 360° rotation of the driving and steering power turret is possible, this maneuverability being equal to the firm's previous designs. Model DFP is called the Pallet Toter while the other is the new heavy duty skid lift model. Both, however, have power operated hydraulic pumps.

(Continued on page 30)

The Lift Behind The Airlift

PROBABLY no other industry has been so quick to take to the modern forklift truck as the modern airlines and airfreight outfits. Gaining impetus during World War II when there were mountains of material to move and great fleets of air transports to move them—but a shortage of brute manpower to help with the loading—



A Hyster Model 150, 15,000 pound lift truck, used in maintenance work at San Francisco's International Airport.

the forklift truck came into its own. Today, a vastly improved lift truck is in use in air transportation and maintenance service in every part of the world from Alaska to New Zealand.

The lift truck is a natural for this type of work, combining all the advantages of a hydraulic elevator with the mobility of a jeep and the utility of a crane. The uses around the hangar, in the loading areas and maintenance shops are almost endless. Large lift trucks even lift a small lift truck into a transport for use in stowing and unloading at the destination!

Modern lift trucks today are built in all sizes and capacities from 1000 pounds to 15,000 pounds. In addition, hundreds of attachments have been designed such as booms, engine carriers and Load Grab arms to further increase their utility.

Today, few modern airlines could operate efficiently without these highly adaptable machines.

NATIONAL, Eastern and Delta worked with the breeders, and Riddle worked with a carton manufacturer, and all have helped in their own way to make Miami's . . .

Tropical Fish—

TROPICAL FISH are spawned in water and live and thrive in water. Air that humans flourish in is a deadly enemy of the fish. Yet the air, which kills fish if they are exposed to it long enough, has played an important part in giving new life and growth to an industry which breeds and sells these brilliantly colored creatures of the sea.

New containers made of waxed cardboard are playing a big part in this growth story, too, but more of this in a moment.

Just eight or ten years ago it was almost impossible for people living great distances from areas where tropi-

cal fish are spawned to purchase them for a home or office aquarium. Live fish could not be shipped to these areas because the long and rigorous overland journey, with fish boxed in cans containing a minimum amount of water which passed through areas of widely fluctuating temperatures, was more than these delicate fish could stand.

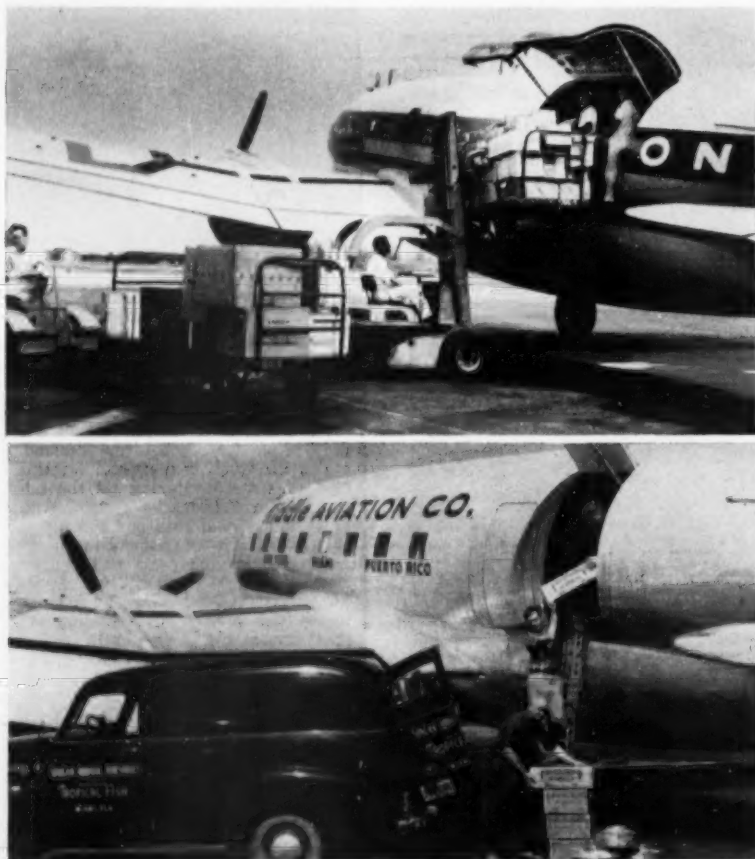
Now, people living thousands of miles from the sub-tropical areas—where the rarest and most spectacularly colored tropical fish are produced—can, and do, enjoy a hobby of collecting and raising these gaudy little peacocks of the deep. And the atmosphere, the air-

plane's roadway, is one of the big reasons why this is so.

For example: A land trip from Miami or Tampa (major producer cities in the tropical fish industry) to Los Angeles requires four to six days. This is too long a time to insure survival of live tropical fish when shipped in canned or boxed water. By air, the total trip time from consignor's aquarium to consignee's hands takes less than 14 hours. This is part of the air cargo story. Here's the other part about modern packages and containers and how they have been so important in this particular story.

Not too long ago, it was considered quite a feat to ship tropical fish for distances exceeding 1000 miles. Large tin cans were filled with water and fish and then packed in wooden crates. Even with excellent care en route, the shipments usually arrived with at least a 50% loss.

When airfreight came into being, a few farsighted fish breeders and air carriers realized the potential of this expanded market. A lightweight aluminum can was designed that would fit inside a cardboard carton. Shredded paper was then placed between the can and carton to provide insulation. It was now possible to ship more fish at less weight greater distances with practically no mortality. As shipping methods improved, the market began to expand. In fact, fish breeders were faced with the difficult problem of meeting demand. It was discovered that the South Florida climate was about the best in the United States for raising tropical fish. Large outdoor pools could be installed for breeding purposes with very



National Airlines, above, probably the largest carrier of tropical fish in the United States, and Riddle Aviation, below, all-cargo carrier, are both shown loading up with tropical fish in cardboard containers. Airfreight has given new impetus to the tropical fish industry by cutting the fish's mortality rate from around 50% to practically nothing, says National. Only airfreight could do it.

A Booming Industry

little personal care required. Occasional cold snaps were encountered but by keeping the water circulating from the wells into the pools, a desired temperature of approximately 72 degrees could be maintained. Occasionally during the summer months, temporary shade had to be erected in order to provide relief from the sunshine. As breeding methods improved, shipping methods were compelled to keep pace. Tests were run by the breeders and air carriers in several different types of containers. Actively cooperating with the breeders were the major air carriers from Florida—National, Delta and Eastern. National is probably the largest carrier of tropical fish in the United States. Shipments were made to far off points like New York, Philadelphia and Boston, allowed to sit in the sunshine or, in winter outdoors exposed to the cold, and then returned to South Florida for inspection purposes.

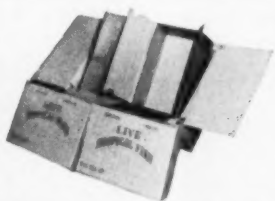
Tests proved that these shipments could be handled even during the winter season in belly compartments of DC-6 type equipment. These tests showed that during the months of November, December and January, the minimum belly compartment temperature reached after several hours of flight was only 35 degrees. In February and March, the minimum was 30 degrees. As even a 40 degree differential between water temperature inside the cans and the belly bin temperature results in a temperature drop within the cans of only 2½ degrees per hour such hauls as Miami-New York City or Miami-Chicago of four to five hour deviation cause no considerable lowering of the water's temperature.

The container next accepted was a polyethylene bag that fit inside a cardboard container. As this bag was flexible it conformed to fit the contours of the carton. While this bag proved adequate and is still being used, another method that has become widely acceptable is a waxed lined cardboard carton that has no seams. This carton is folded

and stapled at the top and a lid placed over this to avoid spillage. Two of these waxed lined cartons are then placed inside a large carton that has been constructed to accommodate a false bottom and false sides that create

at least a one inch air space on each side and the bottom. The lids on the two smaller cartons provide insulation from the top. The greatest advantage of this package is that almost twice as many fish can be shipped at the same

(Continued on Page 32)



The All-Important Container

LAST YEAR nurseries in Miami shipped about \$2,000,000 in tropical fish to jobbers and dealers. Now producers expect to double their business this year.

Shipping containers have been one of the biggest headaches of the industry, however. Circular metal cans, frequently in use, were heavy and consumed space. Consignees were required to return empties at their own expense. A new container was developed for Sunlan Aquatic Nurseries in Miami by Miami National Container Corp., with the assistance of Riddle Airlines, that lent itself to any shipment of bulk liquids. Miami National Container says somewhat similar packages are used to fly frozen shrimp from boats in Caribbean and Gulf of Mexico waters to Miami for transshipment. Orchids and other flowers requiring moisture are flown in cartons embodying the same principles.

The heart of the package is a seamless, waterproof waxed liner coupled with a simple arrangement for insulation. Two cartons hold the fish and are fitted into a master container designed to allow an insulating air space of about one inch on all sides.

Inner cartons contain air holes at top so that fish can draw in oxygen from the insulation area if the oxy-

gen content in the water is insufficient during long hauls. The master container is sealed when ready for shipping. Insulation also retains the heat of the water from Miami even after fish have arrived in cold climates.

The cartons are designed so they may be aeriated if necessary. KLM Royal Dutch Airlines regards the transportation of tropical fish so important it has established a "fish hospital" at Curacao in the Netherlands West Indies. There oxygen hoses are available to keep specimens breathing whenever a lay-over between flights is required.

When empty, cardboard shipping boxes weigh about three pounds, compared to nine pounds for metal cans. When filled, cartons weigh about 25 pounds each, five pounds less than the cans.

Producers say they can ship from 250 to 300 medium-sized tropical fish in a carton, but only 150 in metal containers. Besides taking less space in a plane, they are easier to handle, are less liable to upset and absorb shock better. When cans were used, consignees were required to return empties to nurseries at about one dollar per unit. Cartons are disposable upon receipt.

Tropical fish production expansion in Miami, according to nurserymen, has paralleled the development of airfreight operations; 99% of all producers here ship by air, while 90% already have adopted the new cardboard shipping container.

★ The Need for Airfreighters ★

By Richard Malkin, Consulting Editor

THE other day I read one of Fairchild's effective advertisements in a newspaper. It registered an important message, which read:

"Again and again C-119 Flying Boxcars have come to the aid of beleaguered forces fighting on the side of the United Nations. For short take-offs and short landings on rough, unimproved fields, for parachuting supplies and supporting troops where airfields do not exist, Fairchild Flying Boxcars have no equal in the world today. These heavy cargo carriers provide the only answer for Indo-China.

"In this latest Battle of Supplies, the versatile Boxcars with their ability to carry 64 fully equipped paratroopers, or fully assembled artillery pieces ready to be landed or air-dropped, were placed on loan from the United States Air Force in Japan.

"In every rescue operation from the Berlin Airlift to Korea, in Africa, Labrador, Greenland, and Alaska, the twin boom of the Fairchild Flying Boxcar has become a symbol that means quick delivery of supplies—big loads ready for action where needed and when needed."

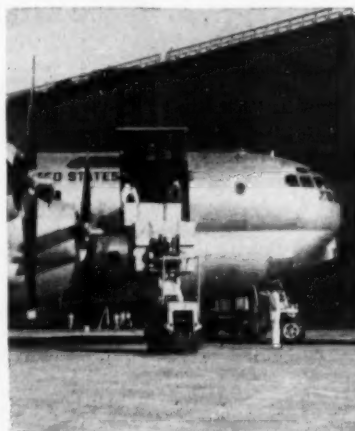
It was a pretty slick ad—good copy, good art work, and all that. A lot of citizens must have read that ad and perhaps got the good feeling of security.

Just about the same time that this ad appeared in the press, I read a couple of articles by Major General Hugh Knerr (Ret.) in *Aviation Age*. The articles were a plea for a Merchant Marine of the Air and the development of a second-to-none cargo-plane fleet. Regular readers of *Air Transportation* will recognize General Knerr (who is no stranger to these pages) and his thesis. His arguments for a strong airlift potential have always been shared and backed to the hilt by *Air Transportation*.

It was somewhat disheartening to see the issue of a Merchant Marine of the

Air still kicking around. This is one of those examples of the gorgeous beauty whom no eligible bachelor has cared to marry.

We are living in odd times—odd and dangerous. Washington is economy-conscious—so much so, that already the Eisenhower Administration is with-



ing in the dilemma of how to provide tax cuts and keep the national defense effort at a high level. The answer is simple: it's impossible. Maybe the President hinted that when he said that a price tag couldn't be placed on freedom.

Let's look the facts straight in the face: nobody is doing anything about giving the United States the kind of air freight transport another war will demand. The conversion of passenger aircraft for cargo carriage is not the answer. The record shows that the Communists nearly overran all of South Korea before our airlift composed mostly of converted passenger aircraft could be set into full motion.

The most recent example of the extremely high value of the airfreighter was demonstrated in Indo-China. With the Communist-led Viet Minh forces getting the French a hard time in widely

scattered positions, especially in the Kingdom of Laos, American C-119s laden with supplies carried out a highly successful mission to reinforce the defenders. Up to this writing, at least, the Viet Minh forces have not advanced further.

Concurrent with the dramatic assignment of air transports to Indo-China came the news of the diversion by the Strategic Air Command in Japan of four out of five transport planes to a "highly classified mission." There appears to be no doubt that that secret mission was Indo-China. The sudden switch of the aircraft, however, had its effect on the normal rotation of GIs. Five hundred homeward-bound United States officers and men were stranded in Japan up to 18 days. Another 2000 personnel who normally would have been flown back to the States during this time could not be assigned.

Dept. of Confusion

The point is that even after the lessons of the Berlin and Pacific Airlifts we still feel the pinch of too few airfreighters. No one appears to be alarmed over the situation—no one but a very few men like General Knerr. By the simple process of elementary deduction one must assume that we are not in a position to fulfill two major airlifts simultaneously. Yet the possibility of multiple operations of that sort in the future is very real indeed. I have asked experts whether we could have performed the Berlin and Pacific Airlifts simultaneously, and in each case I have received a negative answer. Certainly it is no secret that the Military Air Transport Service cannot provide the tools in the eventuality of an emergency. It has uttered that cry at official hearings.

It is difficult to ascertain what we're waiting for. There are no fairy godmothers around to wave magic wands and make first-class airfreighters ap-

(Continued on page 33)

FOR
REAL
ECONOMY



USE
AIR
CARGO

VOL. 23

JULY, 1953

No. 1

'Copter Airmail Service Is Proposed for Detroit

DETROIT—Plans were placed with the Civil Aeronautics Board for operating a helicopter shuttle service similar to those already in flying at Chicago, Los Angeles and New York. Proposed by John L. Drummy, president of Detroit Airways, the service would link 44 communities within a 75 mile radius of this city. This would include such points as Willow Run, Ypsilanti, Marine City, Rochester, Plymouth, Dearborn and many others.

Although it will still be at least a year before the CAB acts on the carrier's petition, Detroit's Mayor Cobo has already approved plans for the building of two heliports on the roof of the new Convention Hall. This building, close to the post office, would give the helicopters a clear approach over the Detroit River. The routes proposed, according to Drummy, will be based on the type flown by those airlines currently flying helicopter shuttle services in the United States. Once in operation, Detroit's service will probably save a day in airmail travel time, and possible even two days, Drummy believes.

Airfreight Claims for 1952 Lowest in Shipping Field

WASHINGTON, D. C.—As proof of the statement constantly made by AIR TRANSPORTATION that airfreight is the safest means of shipping cargo came word that for 1952, total net claims paid by the nation's scheduled airlines for loss or damage to airfreight were reduced to three-fourths of one cent on every airfreight revenue dollar received.

"To my knowledge," said Emery F. Johnson, vice president of Air Cargo, Inc., "this is the best claims record ever made by any transportation group." This particular achievement is noteworthy, he pointed out, owing to the fact that almost all airfreight shipments fall into the 1cl and less than truckload category, which makes them more vulnerable to damage and loss. This enviable claims record, he added, is evidence of the scheduled airlines' efforts to bring the most reliable service possible to the shipping public.

It is evidence also of their success in doing so.

Delays in transit, always a source of mishap, have been minimized by the use of modern freight handling equipment and streamlined forms and procedures, noted the Air Transport Association. The use of new equipment helped also to reduce the damage usually occurring in loading

or unloading. For reducing the number pilferages, losses and thefts (which, by the way, also reduces insurance costs considerably) the various airlines have established security departments. Objective of these departments is to discover how losses occur, and to take proper corrective measures for preventing others.

One source, Johnson admitted, to which this admirable claims record could be attributed was the experience in this field of the other forms of transportation. A future source will be the commendable attitude on the part of the airlines that although the current record is excellent there is always room for improvement.

With the 1952 totals now a part of history, it is very likely, observers feel, that 1953's totals will establish a new low in claims while it establishes a new high in volume.

Transatlantic Air Cargo Can Be Bolstered by Scheduled Lines, Says Pan American's Lipscomb

WASHINGTON, D. C.—Characterizing as "silly" statements made at testimony before a CAB examiner that Pan American World Airways' transatlantic air cargo has been insignificant, Willis G. Lipscomb, the firm's vice president-traffic and sales, set forth a list of its accomplishments in this field. The airline is, he maintained, "and for many years has been, the world's largest carrier of international air cargo not just across the Atlantic, but all over the world. We approach the problem of transatlantic air cargo from that point of view."

Concerning the latter point, for which reason the hearing was held, Lipscomb stated that sound competitive conditions, favorable international trade climate and the carrier's proposed lower cargo rates for bulk shipments by the scheduled airlines would develop this business further. In 1947, he pointed out, Pan Am had flown 4,054,000 revenue cargo ton miles across the Atlantic, and by 1952, this figure had increased to 13,623,000. To maintain sound competitive conditions—one of the conditions for bolstering transatlantic air cargo

volume—Lipscomb did not advise the certification of additional American-flag all-cargo carriers. He also stated that the trend in favor of the foreign airlines carrying airfreight had been halted in 1952 and 1953.

Concerning Pan Am's pioneering record in air cargo operations, these 10 "firsts" were listed:

- 1—First to fly all-cargo aircraft internationally.
- 2—First to carry cargo across the Atlantic.
- 3—First to fly all-cargo service to Latin America.
- 4—First to operate pressurized, heat-controlled aircraft over the Atlantic.
- 5—First to carry horses and livestock from the U. S.
- 6—First to publish a cargo traffic manual for cargo sales agents.
- 7—First to devise an acceptable airway-bill as a customs clearance document.
- 8—First to devise a list of documentary requirements for importation of goods by air.
- 9—First to construct a practical means of packaging cut flowers for international flying.
- 10—First to establish C.O.D. and collect services.

Foresees Bright Future

URBANA-CHAMPAIGN, ILL.—The aviation industry, according to Richards C. Osborn, associate professor of economics at the University of Illinois, will continue to become more significant and vital in transportation. Most active and financially the most successful branch of the industry will be the scheduled and certificated airlines, he said, and noted that local service lines will still require continued and substantial airmail subsidies for an indefinite period. Long distance trunk lines are now virtually self-supporting, and the condition of the others had, Osborn observed, greatly improved in 1952.

JACK FRYE, President of General Aniline and Film Corp.



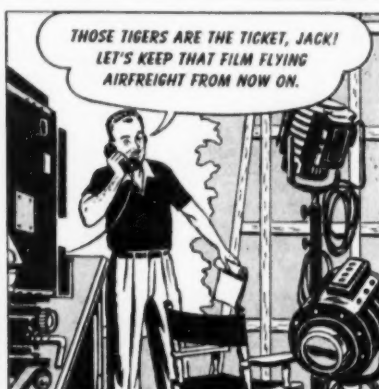
Formerly it took 12 days to ship film from the eastern film producers to Hollywood.



So I called in the Flying Tiger representative and arranged for a trial shipment.



Our trial shipment via the Tigers beat our old schedule by more than a full working week!



Cross-country speed, low rates, and preferred handling have kept us sold solid on the Tigers.

Insures Better Shipping

SANDUSKY—While airfreight transportation can carry perishables with virtually no spoilage whatever, temperature changes due to climate very often can rob the product of some of its value. To offset this effect, particularly on perishable drugs such as yellow fever vaccine, The Hinde & Dauch Paper Company has come up with a series of boxes that comprise one package affording the maximum of safety for the vaccine. Known as Insulpak, eight of these corrugated boxes, each holding 50 ampoules of vaccine, are packed in an inner box that goes into a master corrugated special container while another container, also enclosed, holds dry ice to maintain an even temperature inside the box. When the dry ice evaporates, the space originally used becomes a suspended support for the eight small boxes and keeps them from shifting in transit. With this new type of insulation, the yellow fever vaccine is afforded complete protection from climate variations, and can be flown without loss of strength to any part of the world.

Military Airfreight Gains

WASHINGTON, D. C.—Airfreight service by the scheduled airlines has had a substantial increase in use by the military within recent months, it has been announced by the Air Transport Association of America. As a result of decentralization of the control of military freight movements, there are now four new military transportation offices authorized to handle sizable military shipments by airfreight instead of only one office in Washington, as before. These field offices are authorized to determine the mode of transporting military freight consignments weighing more than 500 pounds and less than 5000 pounds, and, operating under the Chief of Transportation of the Department of the Army, are located in Pittsburgh, Memphis, St. Louis, and Salt Lake City.

The scheduled airlines are aiding the military by setting up a parallel organization to provide a similar function through their own cargo departments. Thus, when desiring to send a military consignment by airfreight, the Zone Transportation Officer merely contacts the designated airline representative in the zone involved, and this representative in turn has immediate access to any or all of the other airlines who may take part in the movement. In this way the scheduled airlines are able to assist the military in moving their freight shipments as quickly and easily as possible.

Opposes Non-Skeds Growth

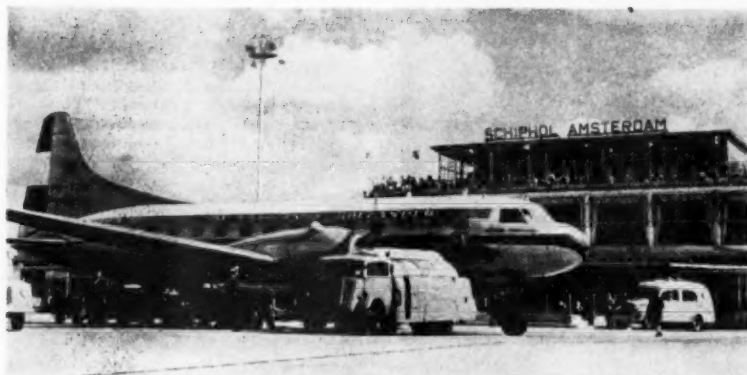
WASHINGTON, D. C.—In his appearance before the Senate Select Committee on Small Business, J. H. Carmichael, president of Capital Airlines, said that the unrestricted expansion of non-sked or irregular airlines operations would jeopardize the sound and orderly development of the nation's air transportation system. Their operations, which Carmichael referred to as "skimming the cream" of airline traffic between major traffic generating points, would eventually make it impossible for scheduled carriers to support less profitable short-haul routes with their earnings from high density routes, he said, and would threaten also the continued existence of scheduled air transportation on the non-subsidy basis such as Capital now flies.

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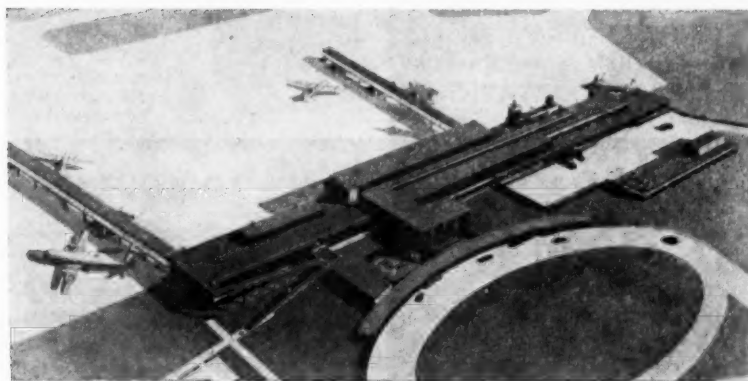
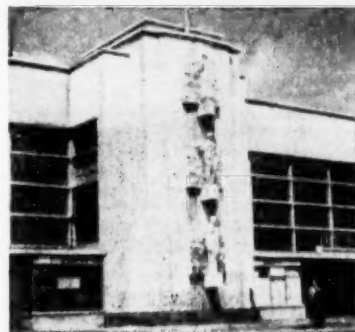
THREE TERMINALS



SCHIPHOL AIRPORT—Just as their American counterparts do at La Guardia and Idlewild, visitors at Amsterdam's Schipol crowd on the observation deck to watch the airplanes come in and go out. The airport is situated just six miles from the city, and features one of the newest freight terminals in Europe. Last year, 36,034,017 pounds of airfreight passed through Schipol, and the airfreight total is destined to be higher this year. An average of 612 arrivals and departures currently take place here each week, about 60% of them flown and handled by KLM Royal Dutch Airlines.



ORLY and LE BOURGET—Both airports serve Paris by providing the maximum of service and space for cargo and passengers flying into or out of that city. Orly, however growing larger as a passenger terminal, and Le Bourget handling more of the cargo. Nevertheless, airfreight flying over the North Atlantic still lands at Orly whereas airfreight from Asia and Africa generally lands at Le Bourget. The older of the two—Le Bourget, marks the spot where Lindbergh landed on his famous flight from New York to Paris in 1927. Both terminals stand as among the busiest on Air France's system.



INTERNATIONAL AIRPORT—This architect's drawing shows the new terminal building that soon will grace this airport at Philadelphia. A model of economy and modern design, the structure contains two piers, or 'fingers' with retractable gangplanks for easy loading or offloading, and an airfreight depot shown on the right. When finished, the terminal building will cost eight million dollars, officials revealed.



ALLEGHENY AIRLINES: Identified with aviation since 1937, Leslie O. Barnes was elected president of the firm at a recent board of directors meeting. At that same meeting, the airline's former president, Robert M. Love, was elected board chairman. The airline, formerly known as All American Airways, was recently recertificated by the CAB.

Avianca: The carrier's president announced the appointment of Juan Ucos as the firm's general representative in the United States, Jamaica and Bermuda. Ucos, a member of the Wings Club of New York, joined Avianca 15 years ago and has been its special U. S. representative since 1949.

Civil Aeronautics Board: Oswald Ryan was designated by the President of the United States to continue as chairman of the Board. Ryan is the only member of the original Board, established in 1938, that is still serving. The President also designated Harmer D. Denny as vice chairman. Denny is the newest member to serve on the CAB.

Colonial Airlines: All directors were re-elected at the carrier's annual meeting, held at Wilmington. This means, of course, that Branch T. Dykes is still president of the airlines. The stockholders also authorized the extension of the agreement providing for the sale of Colonial's property to Eastern Air Lines.

Flying Tiger Line: Now in charge of the all-cargo carrier's Washington office is Lewis Carter Burwell, Jr., who was elected a vice president and assistant to the president. Prior to this, he had been president of Resort Airlines, a lieutenant colonel with the Troop Carrier Command,

and a former member of the Million Dollar Round Table of insurance salesmen.

Frontier Airlines: C. A. Myhre is now the airline's president while its former president, H. S. Darr is now chairman of the board. John D. Lindsay is now vice president, traffic and sales, and L. P. Blatter is treasurer. No change was made concerning R. M. Wilson and Emil Levin; they are still directors and will be for the next three years.

Hiller Helicopters: From Curtiss-Wright came William C. Jordan in the capacity of vice president and general manager as well as a director of the rotary-wing manufacturer. To his new post, he brought an extensive experience in the aircraft industry that dates as far back as 1924.

Northwest Orient Airlines: James C. Robertson has taken over the newly created position of assistant to the vice president of operations, having left his post with Hawaiian Airlines for the new job. Another new appointment concerns Russell G. Collins, who has been named an aide to James Mariner, NWA's assistant vice president-sales.

Pan American World Airways: Juan T. Trippe, president, received the Dominican Republic's highest decoration, the Order of Juan Pablo Duarte. This honor is awarded "for distinguished service on behalf of the country, outstanding achievements, valuable services to society, great scientific discoveries, outstanding works of art and other meritorious accomplishments."

Sabena Belgian Airlines: William A. Clary has replaced William Butler as

cargo sales manager, Butler having moved on to Pan American. Previously, Clary had worked for the Socony-Vacuum Oil people in the Belgian Congo, which is largely served by Sabena, and in Pan Am's sales department. He has also been a lecturer on foreign trade at the City College of New York. His qualifications for his new job therefore should serve him in good stead.

United Air Lines: Effective with the retirement of Harold Crary, who, for the last 25 years has been with UAL, R. E. Johnson has become the carrier's vice president and assistant to the president. Johnson has also been with the airline for nearly a quarter of a century, and his new duties make him responsible for public relations, advertising and related activities.

Flower Cargoes Reach Peak

SAN FRANCISCO—Value of this year's Easter flower cargo forwarded from the Pacific Coast, said Airborne Flower and Freight Traffic, Inc., passed the \$5,000,000 mark. To accommodate the volume, which shippers in and around this city estimated to have been 10% higher than last year's, Airborne used approximately 100 common carrier flights per day during the rush. The firm's flower cargoes for the week prior to Easter Sunday were valued at \$2,000,000 and were flown by way of Slick Airways, Flying Tigers, TWA, United, Pan American World and others. International divisions of some of these carriers were also utilized for flying the flowers to foreign cities in all parts of the world. Over 80% of all airfreight that left the city's International Airport, said the airfreight forwarding firm, during this period consisted of Easter flowers.

Slick and Flying Tiger Merger Plan Presented

BURBANK—The detailed program of the planned merger of Slick Airways with the Flying Tiger Line was presented to the Civil Aeronautics Board, in Washington. In this program, the two all-cargo airlines showed that they could have earned more than two million dollars as a single company, which is almost double the \$1,151,396 made separately during 1952. These figures did not include non-operating income items but were based on assumed revenues of \$38,000,000, or slightly more than the actual business grossed by Slick and FTL last year. Under a fully merged corporation, they claim, gross business could exceed \$45,000,000 and bring with it a substantial increase in net profits as well.

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*Miami to Panama over the route of PAA.



Investigation Favored

PORTLAND, ORE.—With the announcement issued by the Civil Aeronautics Board that it will conduct hearings to eliminate wasteful competition within Alaska, A. G. Woodley, president of Pacific Northern Airlines, commented that "this investigation will produce a stronger air transportation system in Alaska and will result in greater benefits to the public and better financial stability for all the Alaskan air carriers." This investigation, he affirmed, represented action taken on his proposal, originally offered in 1948 and renewed each year since, to look into Alaska's route pattern and cut out "wasteful and uneconomic service in the Territory." The CAB also announced that it will study the desirability of PNA merging with Western Air Lines. In the meantime, its Alaska schedules were increased to two non-stop flights daily between Seattle and Anchorage, and two weekly flights were added between Portland and Anchorage. These are considered the first step in the firm's expansion program designed to triple its service over PNA's entire system.

Resume Talks in Paris

PARIS—Five delegates from the Civil Aeronautics Administration and the Civil Aeronautics Board attended a meeting here to complete proposals for aircraft performance standards. These in turn are to be presented after completion to the Divisional Meeting of the International Civil Aviation Organization scheduled for next March. The Paris meeting was the fourth held in the past two years.

MISS PERFECT PACKAGE—1953

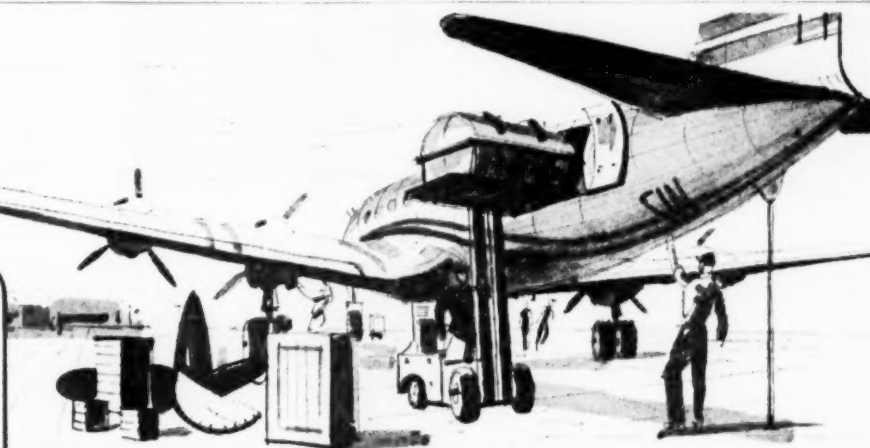


Airfreight transportation offers many attractive advantages to shippers, all of them personified by Joyce Johnson, the Flying Tiger Line's 'Tiger Girl' who recently was elected 'Miss Perfect Package of 1953' by the Traffic Club of Greater Los Angeles.

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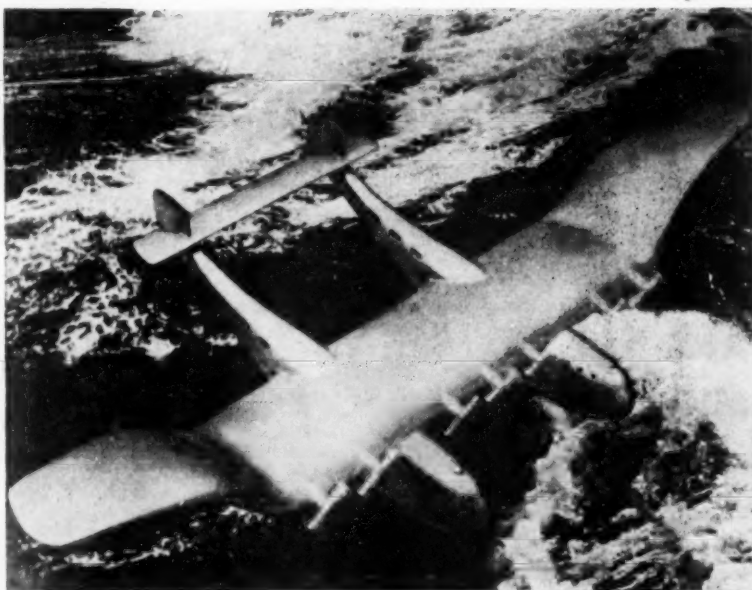
Planes for Freight

Current . . .



This is the interior view of the cargo giant, Convair's XC-99, world's largest land cargo plane. Built for experimental purposes, the huge craft has a cargo capacity of 100,000 pounds, far and away greater than any of the planes in commercial cargo operation today.

. . . and Projected



The Catamaran Flying Ship—double-hulled transport of about 300 tons—may well be the cargo plane of tomorrow, observers say.

S&W Seeks Reduced Rates

NEW YORK—Expanded schedules and the broadening of airfreight markets both in the United States and in Western Europe has prompted Seaboard & Western Airlines, transatlantic all-cargo carrier, to revise its general and specific commodity rates. Adjustments in the former category affects 18 terminals in Western Europe and the Middle East, while those in the latter class affect 12 Western Europe destinations. In announcing these revisions, recently filed with the CAB, S&W's executive vice president, Arthur V. Norden, stated that the expanded markets had prompted the carrier "to seek rates more attractive to the users of all-freight transportation across the Atlantic." Dusseldorf, the iron and steel center in the Ruhr, was included in the tariffs due to its growing economic importance, Norden added.

In May of this year, Seaboard completed six years of transoceanic operations. Operating a fleet of 10 DC-4s, the company has carried such disparate freight items as helicopters, snakes, monkeys, aircraft engines, boiler tubes, serum, ships' propellers and rudder frames and a host of other items. Its first flight was operated out of Newark Airport to Geneva with 14,000 pounds of wearing apparel aboard.

United Improves Service

CHICAGO—Airfreight shippers and consignees are being offered greatly improved service by United Air Lines as a result of a new system of centralized control procedures. Patterned after United's centralized method of handling passenger reservations, space-weight freight allocations have been established for each flight in and out of main terminals, and a Cargo Expeditors Section has been added to the Payload Control Center at UAL's Denver Operating Base.

Where, formerly, freight movements were monitored through a series of separate cargo control stations and the general practice was to place freight aboard the first available flight going in the general direction in which the shipment was consigned, under the new method, cargo expeditors at Denver now control freight allocations and routings in terms of each flight and determine the fastest routings in the light of overall operations. This eliminates almost completely in-transit removals.

Officials of the company believe that this new control plan will eventually replace the hit-or-miss methods which have been tolerated in the past.

Lists 1952 Cargo Gains

LONG BEACH—From the 395,000 pounds of airfreight and air express handled at the Municipal Airport here during 1951, the total jumped to more than 1,000,000 pounds in 1952. These figures, compiled by the city's director of aeronautics, Glen L. Arbogast, show that during 1952 the biggest gains were made by the Flying Tiger Line, which flew 688,600 pounds of inbound air cargo and 60,000 pounds of outgoing air cargo. Other improvements showed that where Western Air Lines and United Air Lines together carried 298,907 pounds in and out of this point during 1951, and that their combined total during 1952 rose to 335,741 pounds.

SEABOARD & WESTERN AIRLINES' FREIGHT FIGURES

Totals made in its six years of transoceanic all-cargo services

	Ton Miles of Freight	Revenue Miles
1948	2,228,643	1,024,812
1949	6,403,410	1,766,131
1950	4,053,835	1,334,730
1951	17,673,540	4,602,956
1952	24,159,299	6,219,647
1953*	31,546,459	7,826,192

*Up to April 30.

KLM Cuts Commodity Rates

AMSTERDAM—Transatlantic commodity airfreight rates have been cut by amounts up to 60% by KLM Royal Dutch Airlines. The new rates, recently put into effect, are designed to encourage the wider use of airfreight by manufacturers of lower priced goods, stated company officials.

New Ferry Services Start

LONDON—Following the granting of licenses by the Ministry of Civil Aviation, Silver City Airways is now operating two new air ferry services for cars, cycles, and passengers between London and Le Touquet, Southampton and the Isle of Wight. Flights take place twice daily between London and Le Touquet and up to 24 times a day between Southampton and the Isle of Wight, the latter constituting the shortest air ferry service in the world, says SCA.

Private Group Gets TAP

LISBON—Private interests were granted a concession by the government of Portugal to operate the government-owned TAP (Transportes Aereos Portugueses). This concession, valid for the next 20 years, provides that 75% of the capital of the new company shall be of Portuguese origin. In addition to the regular routes flown by TAP, plans have been put forward to add a new flight between Lisbon and Rio de Janeiro as soon as additional long-range aircraft can be obtained.

LAI Has New Schedule

ROME—For its new summer schedule, a new flight has been added giving LAI Italian Airlines three weekly departures out of New York City. These now take place every Monday, Wednesday and Friday while the return trip out of this city takes place on Sunday, Tuesday and Thursday.



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1 A handsome, illustrated booklet containing all the information on the new hydraulic lift trucks developed for easy handling of heavy loads. 16 full pages of facts and pictures.

2 Information about a redesigned space heater now used by many airlines and in many airports is yours for the asking. The heater is portable and streamlined, and the bulletin leaves nothing unanswered.

3 *Speed . . . in Photo and Fact*, another of the interesting booklets depicting the particular values of air express.

4 24-page catalog in color illustrating the new line of Barrett hand lift trucks. Well illustrated.

5 Pictorial progress during 50 years in the life of the American Box Company, manufacturers of wooden and wire-bound boxes and crates.

6 Sample back number of the *American Import & Export Bulletin*, giving news of developments in the foreign trade industry. Covers Customs, Commerce, Agriculture, Treasury, and State Departments thoroughly. Reports on changes in laws, rules, regulations, etc.

7 Illustrated and fully described in a six-page folder are facts for the shipper and packer interested in strapping, seals, tensioners, sealers and accessories. The products are for banding all types of packages, bales, boxes, pallets.

8 Bulletin 5191, illustrates and briefly describes the principal units in an

expanded line of industrial trucks and tractors. The complete line is graphically presented in this attractive, four-page folder.

9 Here's a handy gadget being distributed by a prominent freight forwarding firm. It's a combination key ring and auto license holder which fits neatly into your pocket.

10 Both entertaining and educational, a 20-minute color and sound film is available to clubs, schools, business groups and television stations. It shows how business airplanes help industrial leaders save time. Highly informative.

11 A new eight-page specification booklet listing the advantages of the new fork lift trucks. Dimension drawings show their maneuverability; detailed specifications allow comparisons with other trucks. Complete in every detail.

12 *How To Help Your Post Office Help You*, a new booklet, copiously illustrated and designed to help accelerate postal service whenever necessary. It will prove timely and valuable to parcel post shippers as well as to users of regular letter mail.

13 For those whose trucks are a vital part of their business, a new, large, 16-page booklet is ready to help keep them rolling. Fifty-one illustrations with explanatory text will show you how to prevent truck failures and save on overhaul expenses.

14 Literature describing a new-type gummed tape dispenser which is

operated like a telephone dial, measuring and cutting the tape accurately while moistening it.

15 A catalogue and descriptive booklet dealing with the classification, design and operating requirements of instrument bearing is now available. *Intended for instrument engineers only*, Booklet AIB gives descriptive details and dimensional data for a full line of instrument ball bearings. Highly technical and illustrated.

16 *Units of Weight and Measure, Definitions, and Tables of Equivalents*—a valuable 68-page book for all shippers. Handsomely put up with leathereite cover.

17 An attractive and valuable wall chart in color, showing the proper procedures in storing gummed tape, the use of automatic dispensers, and the application of gummed tape. Should be on the walls of all shipping departments. Illustrations tell the story in a glance.

18 Complete information concerning five new fork lift trucks is now available for all shippers interested in improving their line of trucks with an eye toward speed, efficiency and maneuverability.

19 Condensed catalogue #11 offers a complete line of scales for every industrial need. It's a handy, illustrated reference for scales that record weights from 1/64th of an ounce to 300 tons.

20 The best way to get out office mail faster, at lower cost and with more prestige is fully discussed and illustrated in a booklet aptly titled, *How To Get Your Mail Out*. Also included is a card for obtaining information on allied subjects.

21 Quite often shippers turn tourists, and if they've a mind to go to South America, Braniff has put out a sumptuous, multicolored folder that should prove helpful. Beautifully executed to whet anyone's appetite for South America.

22 A job study showing how an Albany manufacturer of cleaning products increased plant capacity 400% with a carefully planned integrated handling system.

23 *Off the Cuff*, an informational magazine produced by a leading manufacturer of materials handling equipment. Well illustrated.



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24 Descriptive brochure on the brand new book, *Boxcars in the Sky*, which tells the thrilling story of commercial and military air cargo, from A to Z. This volume is the first of its kind published anywhere.

25 For foreign freight forwarders and custom house brokers who find themselves vexed and bewildered because the courts of many countries interpret international trade regulations differently from those of the U. S., there's a new 32-page booklet out on foreign trade definitions that includes numerical conversion tables.

26 *Gourmet Guide to Good Living in South America*—a 55-page booklet which presents the business air traveler with all the necessary know-how relating to foods, restaurants, hotels, clubs, etc.

27 *What to Expect from Wirebounds*—an attractive booklet which presents the construction principles of wire-bound boxes and crates. Includes 24 case studies.

28 *The Picture Book for Parcel Post Shippers*—an illustrated booklet explaining economies in metered parcels.

29 *Consular Documentary Requirements and Charges*, as prepared by one of the leading airfreight forwarding firms. Valuable for international shippers.

30 Latest issue of *Industrial Review* which highlights the advantages gained through the use of a certain specialized packing tape.

31 Latest issue of a valuable magazine which includes many useful tips on the use of steel strapping in packaging shipments. Well illustrated.

32 A chart showing step-by-step instructions for sealing V's and W cartons with tape to meet Government specifications. Ten steps are depicted. Includes sealing a carton's innerliner and outer seams, and covering and protecting carton labels. A handy reference.

33 *Peggy and Mado*, an unusual comic-type booklet which does a terrific job explaining how a four-week vacation can be spent in France.

34 Here's the very latest issue of the New York State Airport Map and Directory. This is a revision of the last map offered in these columns.

35 Just about everything the air-freight shipper has to know about tariffs. This new, revised list is designed to simplify the finding of facts necessary for shipping. Approved by the CAB.

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DC-7 To Be Used in 1954

SANTA MONICA—With the successful completion of its maiden flight, Douglas Aircraft's new DC-7 will probably be seen in operation during 1954, company officials say. This new transport, which Douglas claims is the fastest piston-powered commercial airliner in the world, has already been ordered by four major United States airlines. With a top speed of 410 miles per hour and a cruising range of 365 mph, the DC-7 is eight feet longer than the DC-6 and can carry up to 19,400 pounds of air cargo.

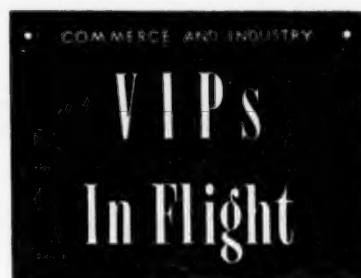
While the DC-7 is being put into production, Douglas is also going ahead with a new addition to the line—the DC-8 jet transport. When production would start has not yet been determined, but the company reported that increasing pressure has been put on U. S. manufacturers to build a jet transport since the *Comet* first appeared.

NWA Uses New Name

ST. PAUL—While retaining its corporate name, Northwest Airlines now conducts its services under the name of Northwest Orient Airlines, which is also being used in all advertising and promotional materials. This change, said Harold R. Harris, president of NWA, was made in order to identify more closely the airline with the routes it serves. These extend all the way from New York City to Hawaii, Alaska, Japan, China and the Philippines.

Queens' Fashions Flown

NEW YORK—Among the items shipped via air recently were valuable, authentic reproductions of the court gowns of Queen Victoria, Marie Antoinette, Queen Maria Anna of Spain, Elizabeth of Austria, Margherita of Italy and Wilhelmina of the Netherlands. These constituted a part of a fashion event especially designed for department stores in more than 100 cities in the United States. The emphasis on queens of course stemmed from the influence of the Coronation in England, and the shipping problems were astutely worked out by Emery Air Freight. For moving the delicate costumes quickly and safely, air transportation proved the best method.



JOHN F. BUDD, editor and publisher was among those present recently at the Aviation Writers Association get-together held this year in Dallas. While in Texas, he inspected the facilities at Consolidated-Vultee, Bell Aircraft and Fort Worth International Airport, all of which were booming in aviation's biggest year.

Guatemala received 24 members of the National Editorial Association a short while ago for their national convention. TACA International Airlines flew them there and returned them again to New Orleans. Between flights, the newspapermen and women took a five day tour of Guatemala.

Italian ambassador to the United States, His Excellency Signor Alberto Tarchiani, paid a visit to the Fairchild Aircraft Division at Hagerstown, Maryland, to inspect the first of an undisclosed number of C-119s to be delivered to Italy. The Flying Boxcars will be used by the Italian Air Force as they are used at present by the Air Forces of the U. S., Canada and Belgium.

Four Kansas City physicians flew down to Lima from Houston by way of Braniff International Airways. One of them, General Wallace Graham, had been personal physician to former President Harry S. Truman. The four went to attend a medical mission in Peru.

President Eisenhower is listed as the first United States President to own a pilot's license. He has been a pilot for 14 years, having learned to fly in 1939 when he was stationed in the Philippines. The president, however, hasn't piloted his own plane since 1947.

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BUSINESS FLIGHT



Accommodations . . .

- Members of the Aviation Country Club of California, Inc., all flew their own craft to Oakland's Municipal Airport where plans have been projected to establish a base for private and executive flyers. Put forth by the Oakland Board of Port Commissioners, the plan would be established under a \$10,000,000 airport bond issue still to be voted on. Said B. Rey Schauer, associate justice of California's Supreme Court, "The Oakland Board of Port Commissioners should be complimented for recognizing the pressing need for more accommodations for personal and executive planes, and their efforts have the full support of all citizen flyers."

The Executive . . .

- Daily non-stop DC-6 flights have been set up between New York and Chicago 'for men only'. This all-male service, begun by United Air Lines, is meant to cater, of course, strictly to businessmen, an increasing number of which apparently require such service for business purposes. This service is named, appropriately enough, *The Executive*.

Border Flights . . .

- As the result of an agreement between the United States and Canada, private planes, or non-scheduled aircraft, of the two countries now have less trouble crossing the border. Under this agreement, a pilot of either country merely files a flight plan with either a Civil Aeronautics Administration communications station or a Canadian Department of Transport aeronautical communications facility, depending on his destination. Either of these will then forward the flight notification plan without charge across the border. This procedure applies only when the first intended landing is made at the 43 airports in the U. S. where this service is available and at the 22 designated by Canada.

Three Transports . . .

- This year's Tulsa Oil Show featured airplanes as 'production equipment' for the first time. Three executive transports were featured as indication that the oil companies are using an increasing number of planes for a variety of purposes. The three planes were the Beechcraft Model D18S 8-place executive transport, the 4-place Beechcraft *Bonanza*, and the 6-place *Twin-Bonanza*. A huge billboard containing the insigna of representative oil company Beechcraft owners was erected as evidence of their popularity. The Tulsa Oil Show, incidentally, was first begun back in 1923.

Intents & Purposes . . .

- Besides the extensive use by the oil industry of executive transports, as indicated above, the following companies represent a minute segment of the whole that have found air transportation necessary in conducting business: Sperry Gyroscope, the Chicago Tribune, Deere and Company, Hubinger Company, Asahi Newspaper Company (Tokyo), Commercial Petroleum & Transportation, White Swan Lumber Company, Refinery Engineering Company (all of the aforementioned flying the *Aero Commander*), Crane Company, Byron Jackson, Morrison Knudsen, W. A. Crocket, Signal Oil, Mark Hurd Aerial Survey, Continental Can Company, and many, many others, none of which would now find it convenient not to fly for business purposes.

New Mail Services Begun

NEW YORK—Effective since the early part of June, airmail service was started over the south segment of helicopter route A.M. 111 with Newark Airport as the starting point. A.M. 111 is, of course, operated by New York Airways, and the new segment includes such places as Perth Amboy, Red Bank, Asbury Park, Freehold, Trenton and Princeton. The Post Office Department in Washington, D. C., also announced that airmail service was started at about the same time at Monroe, Louisiana, on route A. M. 98.

Air Forwarder Group Forms

SAN FRANCISCO—To effect a closer working arrangement between the carrier and the forwarder of airfreight for the mutual advantage of each party, 12 certificated airfreight forwarding firms have formed an organization known as the Air Freight Forwarders Association. These 12, which are said to handle the majority of airfreight volume in the United States, have drawn up a constitution for establishing a code of ethics and adequate machinery for reviewing all complaints filed by members. Also important are the organization's aims to "develop just and fair competitive methods in the industry; to promote an educational and public relations program between its members and the CAB, the airlines and the public; and to participate in regulatory and legislative matters."

A recent meeting of members' representatives in New York established the following officers: John D. McPherson, head of Airborne Flower and Freight Traffic, president; H. E. Nelson, of Universal Air Freight Corp., Secretary; Charles Fields, of A.B.C. Air Freight, Treasurer. Charles Gallo, of Air Express International, Norman Jensen, of World Freight Forwarders, and J. F. Miles, of American Shippers, were named directors. Memberships are open only to those firms who have received Letters of Registration from the CAB.

BOAC Adds Dusseldorf

LONDON—Dusseldorf was added recently to become the sixth Continental destination served by the British Overseas Airways Corporation. Using four engined Argonauts, the carrier began this service June 1.

On one of its freighter services from the Far East, the attendant in charge, Robert Channels, was confronted with 12 maternity cases in a shipment of 700 monkeys during flight. At an altitude of 10,000 feet, the York freighter was converted into an impromptu maternity ward while Channels assisted at the deliveries. "Mothers and children are doing well," was the report he turned in at the end of this cargo flight.

Philadelphia Gap Closed

PHILADELPHIA—A new north-south service was recently begun by Colonial Airlines connecting this city with Syracuse, and including such points as Allentown, Scranton, Wilkes-Barre and Binghamton. Connecting these points in Pennsylvania with several important communities in upper New York State closes the gap between these states that previously had been left open to all forms of movement other than air transportation, officials of the airline claim.

Braniff Seeks Extension

DALLAS—A new petition was placed before the CAB by Braniff International Airways for authority to extend its operations to the Pacific Coast. In its original petition, the carrier had requested the right to extend its system only as far westward as Denver, but now desires "authority as broad as that asked by other applicants" seeking extensions to the West Coast. Braniff proposes two new routes, one from Denver to Salt Lake City, Oakland and San Francisco, and another from Denver to Los Angeles and San Diego.

Air France Orders 'Copters

PARIS—Four to six Sikorsky S-55 helicopters have been negotiated for by Air France in its decision to begin an experimental operation of a network of helicopter routes. Mainly, the experimental flights are intended to give the airline technical and operational experience in commercial 'copter flying and to train pilots for such services. Should such services be established, Air France will become Europe's third large carrier to fly helicopters, BEA and Sabena being the other two.

Copper Rushed from Canada

LOS ANGELES—One of the largest single shipments of heavy freight ever to be handled by Trans-Canada Air Lines was flown here recently from Montreal East. The shipment consisted of 10,000 pounds of copper stripping sent on a rush order from Noranda Copper and Brass Company.

Wants Decision Upheld

WASHINGTON, D. C.—Efforts to achieve a subsidy-free goal in its transatlantic all-cargo services, such as already achieved by Trans World Airlines in its domestic operations would be retarded, TWA felt, by further certification of all-cargo service over the North Atlantic. Urging that the CAB uphold its original decision against such additional certification, the carrier's E. O. Cooke, vice president sales, stated that revenues derived from TWA's cargo flights are enabling it to move more rapidly toward self-sufficiency in its overseas network. This progress, however, would be impeded by a reversal of the original CAB decision, he said.

Plan Turboprop C-124s

SANTA MONICA—Several new features are appearing in Douglas Aircraft's new turboprop transport, the C-124X cargo plane. Chief among these will be advanced versions of Pratt & Whitney T34 single-unit turboprops. Another feature will be the complete pressurization of the fuselage to enable its flying of air cargo at the high altitudes where turboprops work most efficiently. Another version of the Globemaster, the YC-124B, will be powered by earlier T34 turboprops, and only the cockpit will be pressurized. This transport will be used, Douglas claims, for both cargo and aerial tanker operations.

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Mr. A. Tee Presents FACTS and FIGURES

AIR EXPRESS: Only now have the gains made during 1952 been issued to the public. Gross air express revenue for that year came to \$32,364,803 whereas in 1951 it came to \$30,675,272. The gain of one and one-half million dollars is, of course, considered to be good. Shipments handled totaled 4,227,513 and weighed an average of 25 pounds each. Statistics furnished by the agency show that air express is carried on 940 airliners and is forwarded on 6300 daily flights throughout the nation.

Braniff International Airways: Last year proved to be the most eventful year in this carrier's history. Revenue earnings increased 26% over the previous year's figures, although the line's net profits amounted to only \$265,100, including income gained through the sale of aircraft.

Chicago & Southern Air Lines: Although total operating revenues rose during the first quarter of 1953, the reduction of mail pay rates put the airline's net profit below that of the same period in 1952. Considering the operating revenues alone, however, they came to \$4,544,566

for the first three months of the year as opposed to \$4,336,332 earned in the same 1952 period. Without the reduction in mail pay, however, the operating profit before taxes would have shown a gain of 54% for this first quarter.

Flying Tiger Line: An all-time high in domestic airfreight traffic was reached for April, reversing the normal seasonal downward trend for that month. Freight traffic totaled \$597,876, a gain of 41% over the \$423,700 made during April of last year. The new figure also made April the third highest revenue month in the company's history, and represented a gain of nearly 12% over the March figure.

Northwest Airlines: Total airfreight ton miles flown during March of this year, as contrasted with those flown during the same month in 1952, showed an increase of 2%, while express ton miles rose 1%, and airmail ton miles went up 13%. The total number of revenue miles flown during that month showed an increase of 28% over the previous March's figure.

Seaboard & Western Airlines: For its operations during the first quarter of

this year, this all-freight airline flew a total of 7,801,504 ton miles for both commercial and military interests. This figure represented a gain of 68% over similar operations for the like period last year. During this period, the carrier made 295 ocean crossings, and logged 1,809,806 revenue miles.

Trans World Airlines: Record gross revenues of \$39,566,457 were brought in for the first quarter of this year. Domestic operations showed great improvement with earnings of \$531,467 before taxes as compared to the earnings of \$221,290 made in the same period in 1952. Volume of business for TWA's entire system broke all records in this same period; the number of ton miles of airfreight and air express showing an increase of 19.8%.

United Air Lines: Gains were recorded in all of the company's departments except mail for the first quarter of this year. Air express ton miles went up 40%, airfreight 3%, revenue airplane miles 13.5%, and passenger miles 14.5%. Despite these advances, which brought the airline's operating revenues up 16%, its operating expenses during this same period rose 20% defeating the effects of the improved business picture. Things look brighter for the second quarter, however, with April having already set up new records in the carrier's freight, express and passenger traffic. The gains made were 2% for airfreight, 28% for air express and 13% for passengers.

Doman Plans Ahead

DANBURY—Plans have already been made, said Glidden S. Doman, youthful president of Doman Helicopters, to meet an emergency switch from military to commercial production without disruption. To effect an easy transition, the firm's sales manager and contracts administrator embarked on a world tour presenting technical information concerning the new craft. The first contract signed, said Doman, was with Japan.

One of the features of the new helicopter is that it can be converted easily for carrying air cargo, having a payload capacity of 5000 pounds. Its seven-foot doors allow quick and easy loading, while its other features—a compact rotor unit and the tail rotor above normal head height—help make it sturdy. Doman estimated that 60 of its commercial IZ-5 craft will be in service by the end of 1954.

BOAC's Progress Cited

LONDON—At a meeting recently held by members of the Airbrokers' Association, Sir Miles Thomas, chairman of British Overseas Airways Corporation, offered a summary of the airline's progress and activities. Freight traffic has increased, he revealed, from 9,000,000 ton miles in 1948 to 14,000,000 ton miles in 1949, 15,000,000 ton miles in 1950, 21,000,000 ton miles in 1951 and 23,000,000 ton miles in 1952. Thus the steady climb of airfreight traffic has indeed proved gratifying to the company. Sir Miles also stressed that there is ample room in the aviation industry for both the nationalized corporations (such as BOAC) and the independent companies, but he warned that they must work together to be certain that neither section becomes vulnerable to outside competition.



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Adds Airfreight Service

LOS ANGELES—Increased airlift to shippers was established by Slick Airways with the inauguration of its new one-stop freight flight from New York to California. Called the "Pacific Express," the new flight (No. 622) stops only at Kansas City for refueling and a crew change. DC-6A equipment is used on these transcontinental cargo flights.

Slick's motion, the carrier announced, to contract with Railway Express Agency for the carriage of air express was denied by the CAB. The airline's application had been filed for immediate permission to carry airmail, air express and air parcel post at non-subsidy rates.

Announce New Britannias

BRISTOL, ENGLAND—Three larger and more powerful developments of the Bristol Britannia are being offered for world sale. These new versions of the Mk. 100, currently in production, are an all-cargo transport (Mk. 220), a combination airfreight-passenger plane (Mk. 250) and a passenger plane (Mk. 300). The new planes will have a fuselage 10 feet 3 inches longer than the Mk. 100 and a gross weight of 150,000 pounds. They have been designed for greater load, greater range, higher speed and lower operating costs, the manufacturer stated, and delivery has been scheduled for 1956-57.

Spanish Line Lists Gains

MADRID—For its operations last year, the Spanish airline, Aviacion y Comercio, produced some healthy increases. Though a small airline, comparatively speaking—flying only Bristol 170s and a few *Languedocs*—the company carried 569 tons of airfreight, flew 138,600 ton miles, and had a load factor (passenger and cargo) of 69.55. It is likely, officials of the carrier feel, that these figures will be passed in 1953.

Flies Wines to Churchill

SAN FRANCISCO—As personal representative of President Eisenhower, California's governor, Earl Warren, sent a case of choice California wines to Prime Minister Winston Churchill. The case consisted of 12 bottles of wines provided by the growers of eight major wine districts in that state. Special air transportation from this city to London was routed by Air Express International Agency. In his letter of presentation, the governor said, "As an expression of the esteem in which you and the people of your Nation are held by the people of the United States of America and of my own State of California, I ask that you accept from me on behalf of my State this small gift of California wines."

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All other interests 2½¢%

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(b) Finland, Germany (exc. Berlin), Austria, Trieste	5¢%	10¢%
(c) Czechoslovakia, Poland, Romania, Bulgaria, Hungary, Yugoslavia, Albania, direct shipments only	10¢%	20¢%
(d) Greece, Cyprus, Turkey	2½¢%	5¢%
2. (a) Africa except Egypt	1½¢%	2½¢%
(b) Egypt	2½¢%	5¢%
3. (a) Palestine, Syria, Lebanon	7½¢%	15¢%
(b) Transjordan	10¢%	20¢%
4. Afghanistan, Iraq, Iran, Saudi Arabia	2½¢%	5¢%
5. (a) India, Pakistan, Burma	5¢%	10¢%
(b) Ceylon	2½¢%	5¢%
6. Australia, Guam, Samoa	1½¢%	2½¢%
7. (a) Malaya, Thailand, Hong Kong, Kowloon, Korea	3½¢%	7½¢%
(b) Philippines, Japan, Okinawa	2½¢%	5¢%

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(A) United States to from Mexico 2½¢%, provided assured agrees to pay reduced rate on all shipments, otherwise individual shipments at full cargo schedule rate.

(B) United States or Canada to or from Hawaiian Islands—Transpacific Cargo Rate.

D—Express (Excluding Air Express)—Charge Cargo War Risk Schedule Rates.



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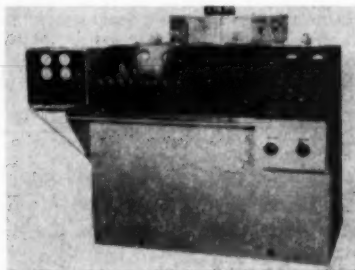
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NEW EQUIPMENT FOR THE Shipper & Carrier

AIRESEARCH MANUFACTURING COMPANY: Weighing only 15 pounds and occupying less than 1/4 of a cubic foot of space is a new ram air turbine that supplies emergency hydraulic power for jet aircraft in the event of engine failure. At Mach 1, which is the speed of sound, the ram air turbine reaches full power in less than one second; at an airspeed of 130 knots, or about landing speed, it reaches full power in three seconds. Thus it is a "safety valve" that can be used to develop the hydraulic pressure necessary to work the aircraft control system should the main hydraulic power system fail. Its speed is automatically controlled, AiResearch says.

Greer Hydraulics, Inc.: A new model Propeller Synchronizer Test Stand has been produced to test the performance



and operation of the Hamilton-Standard propeller synchronizer for both two-engine and four-engine aircraft. In operation, the Test Stand has an electrically-energized mechanical drive that simulates the motion of an airplane's propellers. Aircraft vibration during the test is reduced by an accessory that is unique with the Greer product. Four cathode ray Oscilloscopes offer a series of circular or dot patterns from impulses generated by the Synchronizer's commutator switches and sent through a Scott Transformer Assembly. Later models will combine the four Oscilloscopes into one and will go into production shortly.

Porter-Cable Machine Company: Two model kits, designated the Model 113 and Model 114, have been produced for shop and home use. They each contain a quarter-inch electric drill with accessories, and either will prove a delight to the craftsman. The Model 113 contains, besides the drill and carrying case, an assortment of four high-speed twist drills good for metal or wood, a 5" rubber back-up pad with three abrasive discs of various grits, and a lamb's wool buff for wax polishing. The other kit contains a greater assortment of twist drills, a horizontal drill stand for converting the portable drill into a stationary bench grinder, a 4" wire wheel brush for removing rust, etc., a 3" buffing wheel and stick of rouge and a 3" grinding wheel. The drill in each kit is a Model 107 driven by a powerful Universal motor at 2000 rpm and weighs less than 3 1/2 pounds. Both kits contain excellent ma-

terials and can be obtained at reduced combination prices.

Curran Corporation: Gunk, used extensively in many trades and industries throughout the nation for cleaning purposes, and used also as a rifle bore cleaner by soldiers in World War II, is now available for the first time to the average consumer. According to the firm's chemical laboratory, the cleanser can be used safely on any surface that can be cleaned with soap and water. There will be no clogging of drains, no de-fatting of the skin and hands, no toxic vapors and no flash point. Hobbyists will find it useful for degreasing boat and lawnmower engines, cleaning grease spots off the garage floor, shampooing paint brushes and washing insulating grease blankets from the engines of sport cars. All in all, a thoroughly practical product.

Royal Equipment Corp.: Leading engineers and welding experts are quite enthused over the firm's Royal-Arc hand portable electric arc welder. It is the only 110/220 hand-portable welder that has a heat range of 15 to 200 amps, which makes it a versatile gadget and, being shock-free, also a safe one even for the most inexperienced of operators. The Royal-Arc is nationally distributed to the consumer through local and regional distributors. Its overall length comes to 10 1/2", overall width 7" and depth 6 1/4". Shipping weight is about 65 pounds.

Flight Aids: With the aid of a simple and inexpensive device, the pilot of a plane can plan his landing at a strange airport with complete sureness and accuracy. The device is known as a Tele-Runway, which gives the pilot a visual picture immediately of the direction of the assigned landing runway relative to his line of flight at any time. Only one hand is needed to work it, and the flying time saved pays for the device the first time it is used—the price being only \$1.00. Inquiries for the Tele-Runway may be directed to the firm at Waltham, Mass., or may be made at the local airport. It is destined to be the instrument all pilots swear by since its extra features include a full 360 degree compass rose, proper quadrantal flight altitudes in accordance with CAR 60, the revised VFR flight plan sequence and a list of control tower light-gun signals. Direction-reciprocals can also be read at a glance with the Tele-Runway.

Experimental Flight Made

SAN FRANCISCO—At the request of a British import-export agency in Bangkok, 100 baby chicks were flown across the Pacific on a 7804-mile journey to test their reactions to flying conditions. Hatched just a few hours before flight time, the chicks were loaded aboard a Northwest Airlines Stratocruiser in Seattle and landed about 36 hours later in Bangkok. According to a spokesman for Airborne Flower and Freight Traffic, which handled the shipment, the agency in Thailand plans to introduce the western species of chicken to that part of the world, provided the chickens can withstand the climate there. It is quite likely that this experimental flight is the longest known flight for chicks already hatched.

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Avianca Buys Speedpaks

BOGOTA—In keeping up with the growing demand for more cargo space on flights to South America, Avianca has ordered additional Speedpaks to be carried under its *Constellations* flying here from New York City. The Speedpaks, which can carry up to 8000 pounds of airfreight, cost \$30,000 each, and are expected to be put into service shortly. Avianca has also entered into a contract with the Colombian government to deliver 70,000 baby chicks to this country within the next few months.

PAL Gets Traffic Rights

MANILA—Having added Bangkok to its routes, as reported in *Air Transportation*, May 1953, Philippine Air Lines was given full traffic rights at that point. The air agreement, signed by civil aviation representatives of both the Philippines and Thailand, specifies that the carrier may operate between Manila and Bangkok via intermediate points and beyond in both directions. Thai also received approval for full traffic rights for its own airline at this city.

Anniversary Score Cited

SYDNEY—On the fifth anniversary of its first trans-Pacific flight, British Commonwealth Pacific Airlines released the following figures as a record of its achievements. In the five years of flying the "Southern Cross" route from Australia-New Zealand to North America, BCPA totaled 2,130,454 cargo ton miles, 1,640,366 mail ton miles and 259,068,275 passenger miles. DC-6s have been used on this service since 1949, flying the 8423 mile trip in 31 hours. However, three *Comet II* jetliners will be added to its fleet in 1954, and these will cut the traveling time down to 18 hours. BCPA, for those who do not know, is owned 50, 30 and 20% by the Australian, New Zealand and British governments, respectively.

AYC Flies Freighters

MADRID—Several *Freighters*, in service for more than four years with *Aviacion Y Comercio*, has chalked up an enviable record for the Spanish company. In just one year of operations, the six transports flew 1,500,000 kilometers. AYC's operations strength was recently increased, the firm reported, by the addition of two more *Freighters*.

TAG's Directors Meet

WASHINGTON, D. C.—Purpose of the directors meeting recently held by the Transport Air Group was to accept formally the by-laws of the organization. Among the important items on the agenda was the discussion of expanding TAG's technical activities. This, said L. R. "Mike" Hackney, executive vice president, was in conjunction with a unified program to improve the operating conditions of the C-46. TAG's charter membership, of course, consists of California Eastern Airways, The Flying Tiger Line, Overseas National Airways, Slick Airways and Transocean Air Lines.

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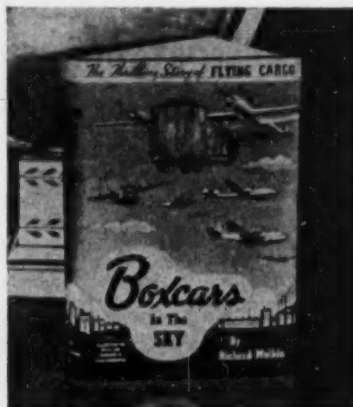
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Some Goals To Aim For

By G. S. Kitchen,
Frontier Airlines

CARGO SERVICES performed by the local service airlines is more than an additional source of revenue. It is a combination of public relations, public service, and the discharge of an obligation imposed on the carrier through the issuance of a certificate to operate.

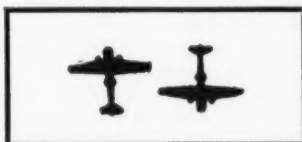
Any business is dependent upon revenue to remain solvent and the revenue derived from airfreight, although only a small percentage of present of total revenues, represents an important source of income which can mean the difference between a profit or going in the red. At least this is the situation in the case of Frontier Airlines.

When air service is started to one of the smaller cities, the people of that community expect and have a right to expect adequate service. They feel that they are entitled to most of the services provided by the trunk carriers, and this includes a flexible cargo program. Public relations is probably the primary benefit of handling a prize winning dog. This is particularly true if the owner happens to be the mayor. We feel that we have an obligation to provide this service even though our certificate to operate does not specifically state that such cargo should be handled. This is especially true in areas that do not have adequate surface transportation. Some communities along Frontier's routes do not have train service and during some seasons of the year the highways are closed because of heavy snows. During these periods such towns would be completely isolated except for air transportation.

The local service airlines have established the need for airfreight service and are doing everything possible to develop new business. But there are many problems to be solved before airfreight can reach its maximum potential. Perhaps the biggest problem is equipment. The DC-3 is a good, reliable airplane, and the only type of equipment which can be used by most local service carriers. It is not, how-

ever, a cargo plane and was not designed as one. We still have to handle all classes of traffic on one type of equipment as the local service operators do not have cargo flights.

Frontier has tried to solve this problem by putting a large cargo bin in the rear of the plane, which is 92 inches long and capable of handling about



1250 pounds of cargo and baggage. A C-47 door opens into the pit which makes it possible to load large shipments which would otherwise have to be refused. We also have the conventional type of forward cargo bins. While this arrangement makes it possible to get an iron lung to an outlying city in a matter of hours, and possibly can save a life, it is by no means the answer to our cargo problem. A DC-3 replacement is needed which will bring down operating costs and make it possible to operate all-cargo flights at present, or slightly increased, rates and still show a profit. This is not possible with the DC-3, even with a 100% load factor both ways. Such high utilization is

only a dream as most of the cities served by local service carriers are consumer areas and produce nothing for the back haul.

Even with DC-3's the local service operators are handling an ever-increasing volume of traffic. Even more could be handled and some of the most vexing problems solved if shippers would discard shipping habits which have developed over the years and package their merchandise for shipment by air.

Each year the airlines handle literally millions of baby chicks. On all-cargo flights there is no problem, providing there is adequate heat. It is necessary to load them in the forward cargo bins on a DC-3 because there is no heat in the rear. The chicks don't mind the smell, but the passengers and crew complain bitterly, and with just cause. In this day of atomic energy and jet planes it would seem that someone could develop a neutralizing spray which would eliminate the offensive odors and not harm the merchandise. If such a spray has been developed, it is not being used in this part of the country and some salesman is missing a lot of good prospects. If something isn't done, it is quite possible that baby chick shipments will be embargoed on everything except all-cargo flights, and this would automatically eliminate a

(Concluded on following page)

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very substantial volume of traffic that is now moving via the local service airlines.

Human remains present another problem. While we don't actively solicit this type of traffic, we have lots of it anyway. In many communities on Frontier's system there is no other service except truck or private ambulance, so we handle the business. Here again the shippers, or morticians in this case, could aid the airlines materially by developing a new shipping method. There no doubt are light-weight caskets available which will meet all the requirements of shipping and health authorities. It should be a simple matter to develop such a container if it's development had the backing of the morticians. The savings in shipping costs due to such a weight reduction would amount to thousands of dollars annually in shipping charges alone, and the carriers would realize a substantial reduc-

tion in handling costs. It would also enable the DC-3 operators to handle additional traffic. The big problem to iron out is among the morticians themselves. Who sells the expensive casket, the shipper or the funeral home which handles the services at destination?

Happy Note

In spite of the many problems which exist, progress is being made. The flower shippers met recently with airline representatives to discuss ways and means of improving the handling of flowers. The National Association of Florists took the initiative in arranging the meeting on the very sound premise that their problems were also airline problems. A working arrangement between the growers and the carriers has developed whereby representatives of both groups meet to discuss problems and note the progress made in solving them. Packaging has been a topic of major discussion and the florists have already developed containers especially adapted to shipment by air. The legitimate flower growers are vitally interested in eliminating the "bad actors" in the flower business who endeavor to sell their merchandise to the airlines by

consistently filing claims for an inferior product. Such practices can only lead to higher rates for the entire flower industry and, in some cases, complete embargoes.

A lot of progress has been made during the very short life of the airfreight business and tonnage is increasing each year, but we have only scratched the surface. If past experience can be used as a guide, we can look to the future with optimism. We have had problems in the past and they have been solved. Those mentioned above, which are only a few examples of the many existing, do not seem to be insurmountable. As the importance of airfreight grows it is only natural for shippers to depend on the service as a normal common carrier operation and discard the shipping habits that have become so firmly entrenched during the many years they have used surface carriers where weight and space are not critical problems.

Frontier will continue to sell airfreight to every potential user and try to maintain our number one position as the leader of the local service carriers in volume of airfreight handled.



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(Air Progress in Brazil)

(by Aldora Nelson)

OCCUPYING MORE THAN HALF of the continent of South America, Brazil contains a vast area of matted, impenetrable jungles, treacherous rivers, and rugged coastal plains. In terrain such as this, transportation prior to 1926 was poor at best. Obviously, some form of travel was needed which could overcome these natural barriers in order to open for development and trade isolated interior areas rich in natural resources and to link together the scattered centers of population throughout the country. The only solution was navigation by air. In November of 1926, the first multi-engine commercial aircraft, a Dornier Wal flying boat, flew from Buenos Aires to Rio de Janeiro. Air transportation had begun for Brazil!

The years that followed showed a rapid growth in commercial flying. The



Kondor Syndikat, owner of the pioneering Dornier Wal, became known as the Sindicato Condor Limitada in December of 1927. Shortly thereafter, the government, quick to realize the advantages air travel offered, gave its approval of regular air transportation in Brazil. A month later, the first scheduled commercial flights got under way between Porto Alegre, Pelotas, and Rio Grande in the southern state of Rio Grande do Sul. Regular mail, parcel, and passenger flights soon followed, and in the early part of 1928, a presidential decree gave Sindicato Condor permission to inaugurate air service throughout the country and abroad. Within five years, the distance covered by Sindicato Condor routes totaled nearly 6200 miles, with routes between Rio de Janeiro and Natal in the north, Rio, Buenos Aires and Panagra to the south, and between Rio, São Paulo and Cuyaba in the interior. The latter route made the important agricultural

products of São Paulo and Cuyaba easily available to the capital for the first time in Brazilian history. In 1933 alone, almost 88 tons of freight, 27½ tons of mail, and some 5425 passengers were carried by the airline over a distance of 558,493 miles.

In the Beginning

Mail carrying soon became an important part of the service of the Sindicato Condor, and in 1934, the company joined forces with the German airline, Deutsche Lufthansa, in flying mail from Berlin to South America. This feat was accomplished by means of a mid-ocean catapult ship which refueled the German flying boats and sent them on to Natal where the mail from Berlin was transferred to a Sindicato Condor for delivery to Rio de Janeiro, Buenos Aires, and Santiago de Chile. Mail now reached Rio within three days after leaving Germany, and Buenos Aires inside of four days. As aircraft improved and flying ranges increased, the mid-ocean stops were eliminated.

In the five year period between 1934 and the outbreak of war in Europe in 1939, Sindicato Condor service expanded greatly. In 1934, the airline's freight figures totaled 202,513 pounds carried over a distance of 48,201 miles, and these jumped to nearly 744,652 pounds flown over some 198,595 miles in 1939. During that same span of years, the figures for mail carriage rose from 58,740 pounds to 89,631 pounds.

By 1941, the growth in air service was so great that the government found it necessary to set up an Air Ministry to control civil, military and naval aviation under one minister. For example, there were now 512 landing fields throughout the country as compared with only 31 ten years before, and commercial flights had increased during that period by nearly 23%.

German influence had always played an important role in guiding the destiny of the Sindicato Condor line, mainly

because the company had originally been formed from a subsidiary firm of the German Deutsche Lufthansa line. During World War II, however, Brazilian sympathies were for the Allied cause. As a result, the Brazilian government assumed control of the company in 1940, and all German personnel previously employed by the airline were replaced by Brazilians. In 1942, the reorganized company was named the Servicos Aereos Cruzeiro do Sul. American aid soon followed the change-over when, in early 1943, the United States Defense Supplies Corporation sent the airline new equipment in the form of four Douglas DC-3s. The United States also provided the line with some invaluable technical assist-



ance by sending down to Brazil 25 technicians to give instruction in the maintenance and repair of the planes. In addition to the equipment supplied by the United States, the company had obtained two Focke-Wulf FW 200 Condor landplanes and 12 Junkers Ju 52 three-engine seaplanes and landplanes when it made the change from German to Brazilian control.

After the war ended, the company continued to add more planes to its fleet. At the present time, this fleet numbers 38 Douglas DC-3s, and three new Convair 340 airliners are on order and expected to be put in service within the year. The addition of these planes has enabled the company to expand its service and to increase its number of scheduled flights to where it is now the only airline in Brazil operating flights to every one of the Brazilian states as well as to all of the territories. It also

(Continued on page 33)

HANDLING CARGO

(Continued from page 7)

For economy, a new model Zip-Lift Electric Hoist with rope control has come out that sells for only \$199.50. Bearing all the features of the regular model, this new one, put out by the Harnischfeger Corporation in Milwaukee, is guaranteed to operate continuously during intermittent usage for a period 25% longer than the rated time limit. Another feature is a weight-overload safety factor of five times the rated capacity. Two models are available with lifting capacities of 500 and 1000 pounds, and either 12 feet or 18 feet lifts can be had, the company says.

Catering to the lift truck industry itself rather than directly to the cargo handlers, Benton Harbor Engineering Works now offers a new hydraulic flow control valve for both fork and straddle trucks that presents several refinements perfected during a three year test. One of these is the elimination of surge at the start of lowering; another being the automatic lowering of speed in an inverse proportion to the load weight. This means, of course, that the heavier the load, the slower it descends, a factor to be considered in the moving of delicate machinery such as mass spectrometers. Sizes currently available

are for 2000 to 30,000 pound for lifts and 45,000 pound straddle trucks. Besides the valves, however, Benton Harbor also manufactures custom O.E.M. cylinders for tilts, shifters, hoists and clamps.

Where hooks may be used for picking up crates, heavy boxes, and other



loads, Palmer-Shile has what it calls a Universal Grab that is made of heavy forged steel hooks. These heavy forged steel hooks have an adjustable spread for handling loads of any size from 16 to 48 inches; the Grab is available in either the 1000 or 2000 pound capacity.

(Continued on following page)

CAA'S INTEREST

(Continued from page 4)

and other factors will enhance the establishment of layout and area criteria. We sincerely hope the Air Cargo Task Committee will develop methods to reduce ground handling time so that we may formulate our related policies and criteria in that respect. Until industry settles on the "hows" of airfreight terminal operation, the airport management will be unable to properly incorporate necessary cargo facilities in the master planning of the airport.

The effect of the concentration of air cargo at a relatively few communi-



ties of our airport system is mitigated somewhat by the fact that presently, in contrast to the passenger traffic which is heaviest on weekends, cargo moves in greatest quantities during the middle of the week and only small amounts move on Saturdays and Sundays. Moreover, cargo flights tend to be heaviest during the night hours, i.e., between 9 p. m. and 6 a. m. On the other hand, passenger flights peak during the daylight and early evening hours. We expect that this condition will continue in the established pattern. Thus, as the peak operations of passenger and all-cargo type traffic do not coincide, it is anticipated that runways and air navigation facilities will be able to handle the increased operations generated by all cargo flights.

It does not appear, on the basis of our forecasted air cargo volume by 1960, that separate air cargo airports will come into existence by 1960. The fact that a substantial volume of air cargo will be handled on combination passenger-cargo aircraft by the scheduled airlines is a major consideration here. The expanding volume of airfreight serves to emphasize the need for expansion and further development of criteria for the general terminal building areas of the airport.



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HANDLING CARGO

(Continued from page 30)

Sturdy $\frac{3}{8}$ " BBB chains provide additional security, and the heavier the load, says Palmer-Shile, the tighter the grip. The Universal Grab can do the heavy lifting, leaving manpower available for other cargo moving tasks.

THE list of improvements, modifications, developments could go on almost indefinitely, with such names as Yale & Towne, Minneapolis-Honeywell, Baker-Raulang, Towmotor and Hyster among others supplementing those already mentioned here. Theirs is a conscientious effort to produce faster, safer and more efficient equipment to facilitate the movement of cargo whether going by air or the slower methods of surface transportation. Others, such as the packaging people, are also doing their share in insuring the safer and quicker movement of cargo, and they deserve some mention here too. Shippers of large, weighty items that required costly, hand-made, nailed wooden crates, which, for the most part, could be eliminated in airfreight shipping, can now avail themselves to the heavy-duty wirebound containers produced by The American Box Company. A lot of size and weight has been

eliminated with the new product, making it especially advantageous for air shipping. Designed to carry equipment weighing even 3000 pounds, the container itself is 35 pounds lighter than the wooden crate normally used, and a lot of 100 amounts to a saving of 3500 pounds of shipping weight, to say nothing of its being easier to load.

Still another product designed to keep pace with faster handling methods is Inland Wire Products' new carton stitcher, a mobile model of the firm's famous 'Speed Stitcher.' This can be used even in remote areas, being powered by a gasoline engine instead of electricity. It comes in a variety of forms, but all of them, the company asserts, will prove of great value in reducing handling and packing costs in export packing, fish and vegetables, to cite a few examples. Inasmuch as fish and vegetables appear to be moving in increasing volumes via airfreight, the economy offered by the 'Stitcher' should prove attractive to shippers of those items. And economy is, after all, the goal toward which shippers, carriers, manufacturers and all the others all strive for.

Lighter woods, the increasing use of plastic bags and containers, the elimination in many instances of crating itself, are all helping the handlers of air cargo considerably and the shippers

especially who, knowing that air cargo is perhaps the safest of all the means of transportation are taking advantage of the reduced tare weights to effect greater savings for themselves or their firms.

While none of the items mentioned herein were designed or manufactured specifically for air cargo use, each having a wider application, they still have their place in the air cargo picture. No one at this time can say for certain that air cargo demands its own type of handling equipment and procedure in order to be more efficient in getting that cargo airborne, but that does seem to be the next most logical step to take. Too little thought has been given to this particular problem, but this too might soon change. In the meantime, experiments are taking place, and some organizations, such as the Air Cargo Task Force Committee, who recognize the need for more improved methods are all helping to give comparable speed and efficiency to cargo on the ground that it receives in the air. Notwithstanding these small instances, the makers of better forklift trucks, platform trucks, hoisting mechanisms, lighter packages and the like are performing a great service to the shipping industry whether surface shipping is used or the newer, faster, more economical method of airfreight transportation.

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BOOKS

WHEN Quentin Reynolds writes a book, he does a good job. Always he picks a subject of more than passing interest, examines it thoroughly, not clinically but with warmth and feeling, and recreates it in terms that immediately hit home. Nor has he failed with his latest book, **The Amazing Mr. Doolittle**, his biography of that fabulous personality, Lt. General James H. Doolittle of more than passing World War II fame. Here for the first time is the full story to date of the man who led the raid on Tokyo. We see him as youngster in Alaska and California, as boxer punching his way through college, as Air Corps cadet and all the way up the ladder and into the skies as an aviation "great" in one of the most entertaining biographies in recent years, surpassing in excitement and interest Reynolds' studies of Judge Liebowitz and Willie Sutton. There is nothing stuffy about this book, which every and any aviation enthusiast will want to read, but it would have helped matters, considering the importance of the subject, if the publishers had included an index in the back. An index is one means by which a reader can go back and read through his favorite passages again—the raid on Tokyo will be one of these—and an index would have made the book complete. (Appleton-Century-Crofts, Inc.; 35 W. 32nd St., NYC; 313 pages; \$3.95.)

Some 250 scholars have collaborated to produce what may well be considered the best one-volume encyclopedia of articles and definitions concerning literature, literary problems, techniques, schools and theories ever compiled. Edited by Joseph T. Shipley, who represents the New York Critics' Circle at UNESCO, this book, **Dictionary of World Literature**, is a thoroughly revised version of the book that had first appeared in 1943 to the plaudits and commendations of many famous critics and professors throughout the country. Now shorn of all inappropriate material and brought up to date, the **Dictionary of World Literature** contains even greater value to scholars and students, laymen and other readers who are interested in the forms, philosophies, trends, currents and devices of world literature than ever before. No university course can ever be as thorough and as concise as this excellent volume. It is an absolute must for all those to whom

literature represents a deeper experience and a more vital contact with reality. (Philosophical Library, 15 E. 40th St., NYC; 453 pages; \$7.50.)

Years of actual experience and application of the materials included in the book make the author, Frederick K. Artz, probably the best authority on the subject, and the book the best of its kind in the world. **Marine Laws** is a law book, published at a reasonable price, and a practical and accurate manual for all those who on occasion must refer to the marine laws of the United States. Such subjects as load lines, admeasurement of vessels, documentation, radio, crimes, legal procedure, etc., are all discussed in a clear language that leaves nothing to be desired by way of explanation. This one volume contains all federal laws and international conventions covering marine matters, including all amendments up to January 20, 1953. The task has not been an easy one for Artz, but he has apparently mastered it in what will stand for many years as the standard work in the field. (Equity Publishing Corp., Stony Brook, L.I.; 1200 pages; \$6.95.)

"A Reappraisal of Problems and Prospects" is a good subtitle for the United Nations' massive study, **Economic Survey of Europe Since the War**. While of small general interest, the book nevertheless represents the developments that had taken place in 1952 and even draws on the broad experience gained during the entire postwar period. Analysis, examination, review and a projection into the future are the several methods employed in this survey, which ends with a discussion of the efforts made to obtain greater economic integration within Europe. (Columbia University Press, 2960 Broadway, NYC; 385 pages; \$3.50.)

Small airlines doing odd jobs from crop dusting to aerial survey very often are writing histories that may not be momentous but are nevertheless exceedingly exciting. One such history has been put between the covers of a book, and it reads as easily and entertainingly as a first rate novel. Called **Tall Timber Pilots**, by Dale White and Larry Florek, the story is full of men, planes and mountains, daring exploits and courageous women. The many photographs add to a book already cram-full with excitement. (The Viking Press, 18 E. 48th St., NYC; 223 pages; \$3.50.)

Not a book but an interesting booklet on the helicopter autopilot has been pub-

lished by the Aeronautical Division of the Minneapolis-Honeywell Regulator Company. The booklet explains the workings of the autopilot, how it aids the pilot in controlling his craft, how its various components function, and how the autopilot itself functions. Profusely illustrated, the booklet is aptly entitled **Helicopter Autopilot**, and it is fairly interesting, too. (Minneapolis-Honeywell, Aeronautical Division, 2600 Ridgway Road, Minneapolis 13, Minn.)

GROUNDWORK

(Continued from page 5)

International Airport, more space has been provided for airfreight. The same holds true for Schiphol near Amsterdam, Orly and Le Bourget near Paris and at International near Fort Worth, to name a few. Buffalo, Binghamton, and Burbank also have new cargo facilities as well as new cargo handling equipment. The list is, of course, larger than this representative sampling, and it is growing all the time, much the same as airfreight volumes are growing all the time, forcing the expansion of facilities and the invention of new cargo handling principles and devices that will effect greater economy of movement and funds and will give increased speed to air cargo while it is still on the ground.



TROPICAL FISH

(Continued from page 9)

weight that was formerly required with the can and carton method. Also, there's no cost for return; the box is just used once and thrown away.

It is now possible to ship tropical fish to most any place in the United States with no loss. As shipping improves, the market naturally increases.

One Miami breeder estimates conservatively that the total value of tropical fish produced in Florida for the wholesale market last year exceeded considerably \$2,500,000. Airfreight wise,

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this adds up to over 100,000 pounds per month.

This same breeder estimated that 10 years ago the Florida tropical fish industry did less than a \$200,000 wholesale business. He emphasizes the fact that growth is due almost directly to fast and frequent air cargo service



maintained by trunk airlines. Development of new throw-away shipping containers has also been important.

The tropical fish industry has expanded in South Florida with such vigor that this same breeder is moving from two leased acres to a site of nine

PROGRESS—BRAZIL

(Continued from page 29)

maintains international flights to Argentina, Venezuela and Bolivia, and has an interline service to Montevideo in Uruguay.

At present, Cruzeiro do Sul is the largest airline in Brazil. Employing approximately a thousand technicians and engineers, the line operates the biggest maintenance base in South America at Cajú in Rio de Janeiro. The base covers an area of some 183,000 square feet and is situated only 25 minutes away from the center of the capital and approximately half an hour from the Santos Dumont and Galeao International airports. At the base are modern repair and overhaul shops which service air frames and aero-engines, radio equipment, instruments, etc. There is also a department which supervises and inspects all landing

acres encompassing plant, outdoor pools and facilities. He expects his business will require another two acres in the next two years.

To point out the importance of the airplane in the tropical fish industry, one Florida West Coast breeder transports most of his fish to distant markets in two converted Lockheed Lodestars owned and operated by his company. He ships to all points in the United States and rarely loses a fish. Other producers in the industry said recently that their capacity to ship has been increased almost 65% with the emergence of new containers and fast air cargo and freight movements. For the future: One Miami breeder has received purchase inquiries from a Tokyo, Japan dealer and is presently making plans to ship a load of live tropical fish halfway round the world by airplane.

One can see that airlines are stepping into the airfreight picture in a big way. Packaging experts are working hard to keep pace with the carriers.

Just where it will stop, if ever, no one can say with certainty.

fields along the airline's many routes.

During the 25 years it has been in operation, Cruzeiro do Sul has flown a total distance of more than 76 million miles, and has carried almost 132 million pounds of airfreight. In 1951 alone, it carried a total of over 11,925 tons of airfreight, over 139 tons of mail, some 357,796 passengers, and covered a total distance of 10,659,540 miles. The full impact of this growth can best be realized when the 1951 figures are compared with those of the year 1933, when the airline, then still known as the Sindicato Condor, flew a total distance of only 558,493 miles and carried just 88 tons of freight and 27½ tons of mail! The percentage of increase between these years amounts to a 13,451% gain in airfreight and a 405% rise in mail carriage.

The reasons for the airline's great

NEED FOR FREIGHTERS

(Continued from page 10)

pear. Nor does Aladdin have his lamp available. We may as well realize that modern warfare—or, the defense of freedom in the modern manner—depends on swift movement in great numbers. If we are to depend on seaborne transport to do our work for us, we'll be as effective as a Continental musket on Omaha Beachhead.

The long-proposed Merchant Marine of the Air is based on the establishment of a vast commercial airfreight system which, in time of stress, can be employed immediately by the military, without the current necessity of consuming precious weeks converting passenger planes to do a cargo job.

It makes a great deal of sense. Why then are we sleeping?

(Note: A few days after the writing of this article, spokesmen for Defense Secretary Wilson revealed that he planned to reduce by 1150 the number of "non-combat" aircraft previously scheduled for the Air Force. Outstanding in this group are transport planes.)

success are not difficult to discover. The country, as mentioned above, was badly in need of transportation capable of surmounting the topographical obstacles which Brazil's huge area encompasses. The government, ever alert to the possibilities of air transportation, has always stood ready to encourage and assist Cruzeiro do Sul as well as the country's other airlines. This, and the fact that the airlines themselves are sharply aware of the many opportunities for aeronautical enterprise which Brazil offers, and are possessed of the pioneering spirit which makes them willing to seek out and explore every new chance for progress which they encounter, have combined to give Brazil a reputation as an enterprising and forward-looking nation.



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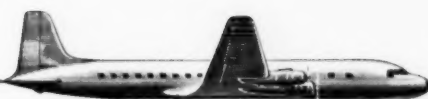
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